

# Project Plan

## Instructions

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## Project Plan Version History

Current Framework tools are available on the Framework Web site.

Release Date	Description
31-Dec-2012	Version 2.4 released. Revised Instructions and Template to reflect changes recommended by the Framework Change Advisory Board (CAB) and approved by DIR (Change request 68).
30-Jun-2010	Version 2.3 released. Revised Instructions and Template to reflect emergency changes approved by DIR (Change request 62) and changes recommended by the Framework Change Advisory Board (CAB) and approved by DIR (Change request 56).
23-Dec-2009	Version 2.2 released. Revised Instructions and Template to reflect changes recommended by the Framework Change Advisory Board (CAB) and approved by DIR (Change request 38).
30-Jun-2009	Version 2.1 released. Revised Instructions and Template to reflect changes recommended by the Framework Change Advisory Board (CAB) and approved by DIR (Change request 38).
30-May-2008	Version 2.0 released. Revised Instructions and Template to reflect changes recommended by the Framework Change Advisory Board (CAB) and approved by DIR (Change requests 38 and 42).
28-Sep-2007	Version 1.5 released. Revised Instructions to reflect emergency changes approved by DIR (Change requests 39 and 40).
1-Sep-2007	Version 1.4 released. Revised Instructions and Template to reflect changes recommended by the Framework Change Advisory Board (CAB) and approved by DIR (Change requests 7, 25, 26, 27, 34, and 37).
28-Apr-2006	Version 1.3 released. In template, corrected header to show bracketed entries for Agency/Organization Name, Project Name, Version Number, and Revision Date.
14-Apr-2006	Version 1.2 released. In Instructions, modified Governance and Scope subsection of the Introduction section to add reference to the Records Management Officer and legal staff. In Instructions and Template, modified Section 6 for clarity.
11-Jan-2006	Version 1.1 released. Changed "Procurement Plan" to "Acquisition Plan" in Instructions. No changes made to Template.
14-Oct-2005	Version 1.0 Instructions and Template released.

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## Introduction

State government, as in all other public and private sector organizations, has consistently struggled to deliver technology projects that meet scope, cost, schedule, and performance objectives. Inadequate project planning creates significant waste due to budget overruns and delays. While there is no uniform formula for success, effective planning and execution are key attributes of successful projects.

The Project Plan is included as part of the Texas Project Delivery Framework (Framework) to establish a consistent method for definition of activities and resources needed to deliver the project's product and/or service. The Project Plan describes the project scope, resource requirements, work activities, and methods for gauging performance throughout the project life cycle. The Project Plan is the foundation for managing and executing on the scope of work defined to deliver the product and/or service.

Planning, management, and control activities that support a project from start-up through closure are included in the Project Plan. The Project Plan defines in detail what should be done, who will do the work, when the work will be accomplished, how much the project will cost, how the product will meet stakeholder requirements, and how the project will be managed in areas such as risks, issues, scope, status reporting, and variance controls. As part of the project review process, the Project Plan is used as a basis to evaluate whether the project is on schedule and within budget and to determine the ability of the project to meet project objectives.

The Project Plan establishes the means for collaborating and coordinating internally and across organizational boundaries. Communication and coordination of activities within and among the project team, agency management, and project stakeholders are enabled by the Project Plan.

## Use of the Project Plan

### Overview

Within the Framework, the Project Plan is a key deliverable of the Project Planning review gate. Agencies should initiate project planning after a project has been formally established to authorize work to begin. Review the Project Charter Instructions and the Business Justification review gate for information about the Project Plan in relation to formal project initiation.

Supplemental tools that are intended to assist project teams with project planning and management are depicted in the appendices of these instructions. Deliverables created with these tools are, in some cases, submitted as part of the Project Plan to a statewide entity (e.g., Quality Assurance Team). Agencies must use each supplemental tool provided; however, each agency has the option of replacing any supplemental tool with an equivalent tool that serves the same purpose and intent. When an agency-equivalent tool is used, it must include, at a minimum, the information identified in the Framework supplemental tool it is replacing.

The Framework supplemental tools, which are available on the Framework Web site, are:

Project Plan Instructions Section	Tool	Supplemental or Equivalent Submission Required
2. Project Organization	Project Contact Register	No
3. Project Start-Up	Work Breakdown Structure	No
4. Monitoring and Control	Change Control Request	No
	Issues Tracking	No
	Project Status	No
5. Quality Management	Quality Project Areas, Categories, and Measures	No
	Quality Register	Yes
6. Communication Management	Communication Register	Yes
7. Configuration Management	Configuration Items Register	Yes
8. Performance Management	Performance Project Areas, Categories, and Measures	No
	Performance Register	Yes
9. Risk Management	Generic Project Risk Factors	No
	Generic Software Project Risk Factors	No
	Packaged Systems Risk Factors	No
	Generic Software Acquisition Management Project Risk Factors	No
	Risk Register	Yes
	Risk Initiation Checklist	No
	Risk Progress Checklist	No
	Risk Completion Checklist	No
	Risk Item Report	No
	Risk Status Report	No

The project team should always be mindful that project planning and management are iterative processes. Thus, the Project Plan should be updated as needed to always reflect current planning information used to manage the project, regardless of whether procurement of goods and/or services through management of solicitations and contracts is involved. The agency may choose to establish specific timeframes for proactive reviewing and updating of the Project Plan throughout the life of the project.

Agencies should review and use the *business* goals and objectives identified in the Business Case and refined in the Project Charter as the basis for measuring the product and/or service performance. Throughout the project life cycle and product or service useful life, performance reviews and evaluations of outcomes should be conducted based on plans defined for performance management.

Agencies should review and use the initial risks considered and documented in the Business Case as the basis for identifying project risks. As part of preliminary consideration of risks, the Business Case included initial risks. Agencies should baseline and comprehensively manage project risks from project planning to completion of project delivery. The agency may consider development of a risk management program to effectively and comprehensively manage risks, especially if the project involves products and/or services that are critical to business operations and processes.

For technology projects that require the procurement of goods and/or services involving management of solicitations and contracts to achieve the project business goals and objectives, the Project Plan, in conjunction with the Acquisition Plan, is used to plan and manage the project activities. For projects involving procurement, refer to the Solicitation and Contracting Review Gate.

A Project Plan must be approved at the agency level and submitted to the QAT prior to spending more than 10 percent of the funds allocated to a project and/or prior to an issuance of a vendor solicitation for the project. Refer to the Framework Core Principles regarding evolution of project delivery information over the life of the project. For more information regarding the Project Plan submission process (e.g., contact names, delivery method), refer to the Framework Web information.

## Applicability

A Project Plan must be developed for any project classified as a major information resources project, and for certain major contracts. Refer to the Comptroller of Public Accounts (CPA) Contract Management Guide for guidance on which major contracts are required to use the Framework.

## Governance and Scope

The Project Manager should collaborate closely with the Executive Sponsor and Technology Sponsor to ensure a common understanding of the project background, project scope, project deliverables, and/or other stipulations that impact the successful delivery of the product and/or service. The Executive Sponsor must identify a Technology Sponsor. The Technology Sponsor is typically the Information Resources Manager (IRM), or the IRM may choose to designate another technology expert within the agency.

A key goal of every Project Manager should be to understand the agency-level governance practices and structures in order to produce a final product or outcomes that meet or exceed the expectations for the project. The Project Manager has ultimate responsibility for ensuring the

Project Plan identifies which governance structures will influence project processes and identifies the roles and responsibilities of formal boards that support specific activities within the project such as a Change Control Board or an Information Technology (IT) Steering Committee.

The Project Manager has ultimate responsibility for ensuring that the Project Plan is developed and approved. Developing the Project Plan is a collaborative effort, in that it requires input from the project team and all project stakeholders. The Executive Sponsor and Technology Sponsor provide support for and approval of the Project Plan. At a minimum, the agency head, Technology Sponsor, Project Manager, and Information Security Officer or designated security staff must approve the Project Plan. Obtain additional input from the Records Management Officer (RMO), legal, purchasing, procurement, and other staff as needed.

## **Section 1. Project Overview**

The Project Overview section describes the purpose and general need for the project, defines the boundaries, and describes the assumptions and constraints.

### **1.1 Project Description**

Describe the approach the project will use to address the business problem. Include a general definition of the information and/or high-level requirements associated with the proposed business process or solution. The description should summarize key information, including how the project will deliver the expected business outcomes and performance objectives.

### **1.2 Project Scope**

Describe the project scope. The scope establishes the boundaries of what the project will and will not accomplish. The scope description is a narrative or bulleted list of deliverables, services, and/or solutions expected as outcomes of the project. Deliverables are the project outcomes that provide well-defined functionality and tangible products. The scope description should reflect products and/or services delivered to the end user and may also include major work products developed and utilized by the project but not delivered to the end user.

The project scope is the basis for defining the level of effort that is required to deliver the product(s) or service(s) to meet the project objectives. Project deliverables concretely establish the scope of a project and will provide the foundation for developing the Project Plan and project schedule. Deliverables should align with the project business goals and objectives identified in the Project Charter. Identify the deliverables that will help achieve the stated business goals and objectives. If a deliverable doesn't achieve a business objective, question whether the deliverable is needed or whether a new objective statement should be created.

### **1.3 Assumptions**

Describe assumptions regarding the processes and/or services affected by the proposed project. For planning purposes, assumptions will be considered to be true, real, or certain. Specifically include assumptions about stakeholders, technology, and staffing, among others.



## 1.4 Constraints

Describe the limiting factors, or constraints, that restrict the project team's options regarding scope, staffing, scheduling, and management of the project. Include any project constraints being imposed in areas such as schedule, budget, resources, products to be reused, technology to be employed, products to be acquired, and interfaces to other products. Identify the project constraints based on the current knowledge today.

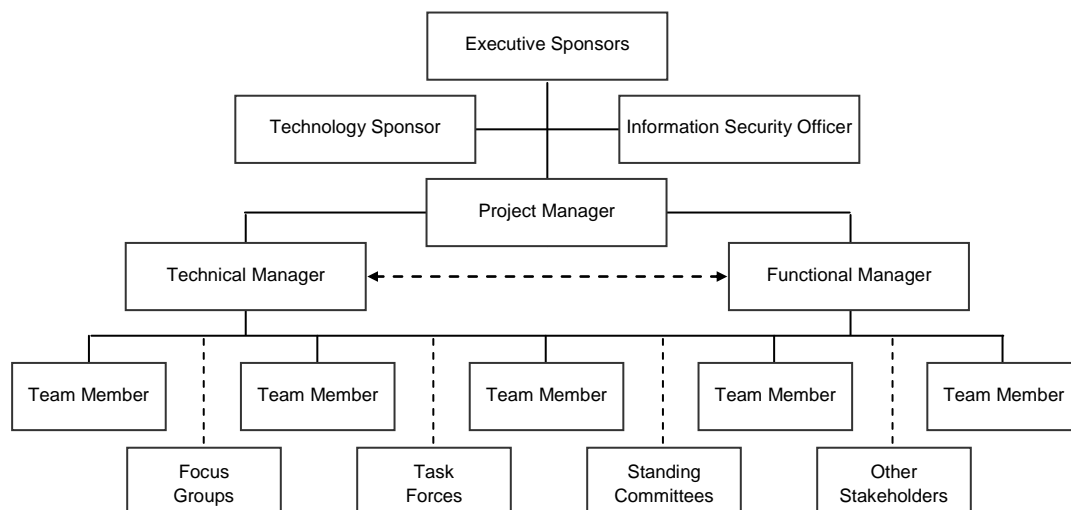
# Section 2. Project Organization

The Project Organization section describes the project organizational structure, including the internal and organizational structure of the project team and stakeholders.

## 2.1 Project Structure

Specify the organizational structure of the project team and stakeholders by providing a graphical depiction as shown in the example project organization chart. Include all roles as described in the Roles and Responsibilities section.

**Example Project Organization**



## 2.2 External Stakeholders

Specifically describe external stakeholders for the project by identifying the stakeholder's function and interest. External stakeholders include administrative, managerial, and other liaisons between the project and the primary entities with which the project interacts. External stakeholders may be identified from business units, customers, focus groups, advisory groups, standing committees, and other project stakeholders. Examples of functions external stakeholders may represent include a system interface team and legal. Examples of the external

stakeholder's interest for the system interface team and legal might be data exchange/interoperability or licensing issues.

Establishing and maintaining project contact information (e.g, name, phone number) is critical during project management. A Project Contact Register may be referred to as a project contact matrix, profile, list, or some other term. A Project Contact Register is provided as a Framework supplemental tool in the appendices. In the Project Contact Register or its equivalent, identify the external stakeholder function, name of liaison for the function, title, and other contact information as necessary.

## 2.3 Roles and Responsibilities

Summarize roles and responsibilities for the project structure and external stakeholders as identified above, including subject matter experts (SMEs). Responsibilities should describe any key project checkpoints for which approval and authorization of work products or deliverables are required.

Consider key roles in critical project activities for overall project, quality, communication, configuration, performance, and risk management, and other areas such as monitoring and control. Examples of key roles include:

- Project Manager
- Executive Sponsor
- Program Specialist
- Risk Manager
- Configuration Manager
- Software Developer
- Quality Control Specialist
- Release Manager
- Build Coordinator
- Change Control Board chairperson
- Configuration Control Board member
- Performance Manager
- Technology Sponsor
- Contract Advisory Team

A Project Contact Register is provided as a Framework supplemental tool in the appendices. In the Project Contact Register or its equivalent, identify each project role, name of individual with responsibility for the role, title, and other contact information as necessary.

## Section 3. Project Start-Up

The Project Start-Up section describes foundational aspects of the project that are required as a basis to effectively plan and manage the project. The project's life cycle model, estimation methods, and schedule, resource, and budget allocations are included in this section.

### 3.1 Project Life Cycle Model

Specify and describe the life cycle model(s) that will be used for this project. Various models exist that guide the processes involved during project delivery and development of the project deliverables. For example, a project life cycle, project management life cycle, software development life cycle, and/or system development life cycle may be used to guide the processes

and development of the products. An agency and/or organization may choose to tailor a specific life cycle model to fit agency and/or project needs. Several models may also be combined to form a hybrid methodology.

Refer to agency and/or organizational standard model(s) if they exist. Since models are adaptable and implementation details may vary among different projects and/or organizations, also describe tailoring of any model used.

### **3.2 Methods, Tools, and Techniques**

Identify the method(s), standards, policies, procedures, programming language(s), reusable code repositories, project management software, and other notations, tools, and techniques that may be used to develop and/or deploy the products and/or services for the project. Include key elements that may be used for certain aspects of the project. For example, include methods and tools used to specify, customize, test, deliver, modify, operate, or maintain deliverables and/or services provided by the project.

Note that methods, tools, and techniques may not be known during planning and may be identified and described at a later point during the project life cycle.

### **3.3 Estimation Methods and Estimates**

Describe the methods used to estimate the project level of effort, schedule, and budget. Include tools and techniques for deriving the estimates such as sizing information in appropriate units of measure (e.g., Lines of Code – LOC, Function Point Analysis – FPA) or an estimation model that relies on historical data to generate estimates based on similar projects, among others. Include the basis for the estimates when describing the methods. For example, identify whether infrastructure costs or customer time is included in the estimates.

Provide estimates for the project on the following:

- Effort – describe in person-months or person-hours
- Schedule – describe in calendar months
- Budget – describe project cost in dollars

Identify the estimation source, or basis, such as the project scope, installation requirements specification, Statement of Work (SOW), system requirements specification, or software requirements specification for the estimates. If a formal specification is not yet available, describe the approach for developing an initial project estimate. Identify the level of uncertainty (or margin of error) and risk by stating the order-of-magnitude for the estimates. Order-of-magnitude estimates reflect a particular degree of accuracy based on preliminary and conceptual data (e.g.,  $\pm 25\%$ ,  $\pm 75\%$ ). The order-of-magnitude estimate (%) will vary based on the project circumstances.

### **3.4 Work Activities**

Provide a reference to the location of the work breakdown structure (WBS) and work packages within the WBS. The WBS should provide a description of the work activities that comprise the

work breakdown structure or the work packages within the WBS. A WBS may be used to organize, define, and manage the work packages. A work package defines the objective for that package and describes the tasks, work products, milestones, and other relevant information by which to manage a defined unit of work.

If a WBS is extensive and if the content is not obvious to the project team members, it may be useful to include a WBS dictionary. The WBS dictionary describes what is in each WBS element, and it may also specify what is not included within an element.

Ideally, the lowest level WBS element should represent a work effort that is manageable for the particular project. A WBS example and template are provided as a Framework supplemental tool in the appendices.

### 3.5 Schedule Allocation

Provide a reference to the location of the project schedule. From the work packages or WBS work activities and other inputs, a project schedule must be developed. Developing a project schedule is done by establishing precedence relationships among WBS activities, assigning work effort and resources, and establishing the start and end date (mm/dd/yy) of each activity and of the overall project. The project schedule establishes the work plan (resources, activities, and timeline) for the project.

The project schedule is expected to show activities with planned effort, duration, resources, start and end dates. Milestones, which have a date, but no effort or duration, can be used to mark the completion of major activities.

To highlight major accomplishments as initially planned in the project schedule, identify major project milestones and planned dates (mm/dd/yy) that represent the completion of specific project work products and end-user products during project delivery. Completion of a milestone typically results in one or more deliverables whereby the processes and/or services will become functional. Deliverables are those results that provide well-defined functionality and tangible products. The list should reflect products and/or services delivered to the end user as well as the delivery of key project management or other project-related work.

### 3.6 Resource Allocation

Provide a reference to the location of the resource schedule. From the work packages or WBS work activities and other inputs, a resource schedule must be developed. Resources are allocated to implement the project deliverables, work packages, and activities identified as a result of the WBS process.

To highlight resources as initially planned in the resource schedule, identify the total number of resources that will be needed for the project, including personnel (FTE and contract), equipment, facilities, hardware, software, materials, supplies, and training personnel (FTE and contract). For personnel, include each of the defined project organizational roles in the resources and describe skill set requirements. For non-personnel resources, such as facilities or hardware, indicate “not

applicable” for the skill set. Identify the estimated timeframe (start to finish) for project commitment. Although the estimated timeframe as identified must be based on a consistent notation for all resources, the timeframe indicated may be on a quarterly, six-month, or some other basis.

### 3.7 Budget Allocation

Provide a reference to the location of the budget schedule. From the work packages or WBS work activities and other inputs, a budget schedule must be developed. Budget amounts are allocated to implement the project deliverables, work packages, and activities identified as a result of the WBS process.

To highlight budget information as initially planned in the budget schedule, identify the budget amount allocated by key budget category (e.g., project milestone or standard cost categories such as personnel, travel, equipment, and administrative support). Identify the time period that may constrain use of the budget within the category (e.g., fiscal year, calendar year, or quarterly).

## Section 4. Monitoring and Control

The Monitoring and Control section describes methods and tools for monitoring progress in terms of ongoing evaluation of outcomes, and controlling project changes. These methods include controlling changes such as changes to the project scope, schedule, and budget, and also managing issues and reporting project status.

Monitoring and control plans for overall change control, issues tracking, and status reporting are described in this Monitoring and Control section. Monitoring and control of quality are described in the Quality Management section. Monitoring and control of project assets maintained through configuration management are described in the Configuration Management section. Monitoring and evaluation of performance outcomes are described in the Performance Management section. Monitoring and control of risks are described in the Risk Management section. If the project involves procurement, monitoring and control for contract management are described in the Acquisition Plan.

The purpose of project monitoring and control is to:

- manage changes to the project scope
- track and review actual project accomplishments and results against plans
- enable revision of original plans to reflect accomplishments and to describe remaining work, if needed
- provide visibility into progress as the project proceeds to enable the team and management to implement corrective action(s) before project performance varies significantly from original plans

## 4.1 Change Management

Describe the process for managing all proposed changes, including how change requests are initiated, logged and tracked, and assigned for analysis and recommendation. As project changes occur, changes must be identified, assigned, reviewed and evaluated, and either accepted, rejected, or deferred. Monitoring and controlling change is critical to successful delivery of a project since changes are inevitable.

Change is initiated by an event. For example, a customer may wish to modify the product's functionality. Other changes could arise from unexpected events, such as mistakes discovered in reviewing the product and/or service's derived requirements, coding errors, or other additions or modifications to the work activities that comprise the agreed upon scope. A proposed change may impact or involve a change to the schedule, budget, roles and responsibilities, technology, or some other aspect of the project.

Include use of a change request form to track proposed changes, and a change request log to track disposition of changes. A Change Control Request template is provided as a Framework supplemental tool in the appendices.

Include the change request review process, including a description of the roles of individuals and formal bodies (e.g., Change Control Board or Architecture Review Board) that are involved in determining specific resolution actions such as approval, rejection, or delay of a change request.

Include any additional processes that may exist to further control changes to certain aspects of the project. Change management includes tracking, reviewing, and ultimately controlling all change requests initiated throughout the project life cycle. Other types of processes may also be used to control the project scope, schedule, budget, technology, and other aspects of the project. For example, technology-specific methods may be developed and used to analyze and accommodate or restrict changes to project scope.

If formal change management policies and procedures have been established at the organization or agency level, refer to the agency and/or organizational practices. In the description, include tailoring of any practices to accommodate specific project needs if applicable.

## 4.2 Issue Management

Describe the process for managing project issues. Include the resources, methods, and tools that will be used to report, analyze, prioritize, and resolve project issues. Issues may include problems with staffing or managing the project, new risks that are detected, missing information, defects in work products, and other problems. Include how the issues will be tracked and managed to closure. An Issues Tracking template is provided as a Framework supplemental tool in the appendices.

If formal issue management policies and procedures have been established at the organization or agency level, refer to the agency and/or organizational practices. In the description, include tailoring of any practices to accommodate specific project needs if applicable.

### 4.3 Status Reporting

Describe how project status reporting information will be used to monitor and control the project. Collection and distribution of the project status information is described in the Communication Management section. Status reporting indicates the current status of the project, describes what the project team has accomplished, anticipates the status of future project milestone decisions, identifies the budget status, and tracks other critical project information as needed.

Include how a project status tool is used to monitor and control the project at the agency level such as a standard project status report. Include methods for the review and approval of the project status information for accuracy and completeness. For example, describe escalation procedures and thresholds that may be identified and used for corrective actions regarding unacceptable schedule and budget variances as highlighted by the project status report. A Project Status template is provided as a Framework supplemental tool in the appendices.

In addition to the processes that support internal monitoring and control, the project team must also report status at regular intervals or on an as-needed basis to the QAT. Refer to the Project Planning review gate for additional information about the QAT reporting requirements for project monitoring. Identify and describe how the project status tool used at the agency level will be used to provide input for QAT reporting requirements.

If formal status reporting policies and procedures for monitoring and controlling projects have been established at the organization or agency level, refer to the agency and/or organizational practices. For example, the reporting method for compiling and producing periodic status reports could be based on earned value management practices. In the description, include tailoring of any practices to accommodate specific project needs if applicable.

## Section 5. Quality Management

The Quality Management section describes the collection of activities for delivering the highest quality of products and/or services based on management of project performance. Quality management includes the processes for quality planning, quality assurance, and quality control. Quality planning involves identifying which quality standards are relevant to the project based on quality objectives, and determining how to satisfy them. Quality assurance is the evaluation of overall project performance on a regular basis to gain confidence the project will satisfy the relevant quality standards. Note the performance of the actual product and/or services (as one aspect of quality) delivered by the project is described in the Performance Management section. Quality control involves monitoring specific project results to determine compliance with relevant quality standards and to identify ways to eliminate unsatisfactory project performance.

### 5.1 Quality Management Approach

Describe the overall, high-level approach to quality management based on project performance. Summarize how the following quality management activities outlined in this Quality Management section will be accomplished *collectively*: quality objectives and standards identification,

monitoring, and control. For example, identify and describe if a formal quality management organization and/or division will be used. Identify if one or more teams will be formed to address a set of quality management activities such as a standards identification team or quality control team. Identify whether an independent, unbiased quality management team external to the organization and/or agency will be used to help ensure effective management of project quality.

If formal quality management policies and procedures have been established at the organization or agency level, refer to the agency and/or organizational practices. In the description, include tailoring of any practices to accommodate specific project needs if applicable.

## 5.2 Quality Objectives and Standards Identification

Based on project-specific methods, describe how quality objectives and standards are identified and organized in preparation for executing quality management. Quality objectives state how the desired quality results will be achieved. Identification of quality objectives and standards should begin early in the planning phase and must be managed throughout the life of the project. Quality objectives may be prioritized, for example, based on the historical, overall agency project performance.

As a critical aspect of quality management, quality objectives and standards are identified and updated in a Quality Register, or its equivalent, throughout the life of the project. A Quality Register may be referred to as a quality matrix, profile, list, or some other term. A Quality Register is included as a Framework supplemental tool in the appendices. Note that an agency-equivalent Quality Register must include, at a minimum, the information identified in the Quality Register Framework supplemental tool.

In the Quality Register or its equivalent, identify the overall quality objectives established for the project. These quality objectives will be used to identify the quality standards by stating the desired outcome. If quality objectives have been established at the organization or agency level for all projects, refer to the agency and/or organizational quality objectives. Include project-specific quality objectives as needed.

In the Quality Register or its equivalent, identify the agency, industry, or regulatory project quality standards that will be followed and assessed. These quality standards will be used to assess whether the quality objectives were achieved.

Identify each of the quality standards that are directly related to project performance. For each quality standard, identify the tracking tool or measure such as the frequency of project reviews or use of a Project Status tool. A generic classification of project issue areas with their associated measurement categories and measures is provided as a Framework supplemental tool in the appendices. Examples of quality standards and measures follow.



No.	Quality Standard	Tracking Tool or Measure
1	Project phase is completed by the established finish date.	<ul style="list-style-type: none"> <li>Project Schedule</li> <li>Project Status</li> </ul>
2	Project is completed within budget.	<ul style="list-style-type: none"> <li>Project Charter</li> <li>Project Status</li> </ul>
3	Quarterly project reviews show vendors deliver requirements specified in the contract by due dates or pay penalties.	<ul style="list-style-type: none"> <li>Vendor Contract</li> <li>Final Acceptance</li> </ul>
4	Project will be completed based on the original project scope and approved scope changes.	<ul style="list-style-type: none"> <li>Project Charter</li> <li>Project Plan</li> <li>Change Control Request</li> </ul>
5	Monthly Project Reviews show the critical path is on schedule.	<ul style="list-style-type: none"> <li>Work Breakdown Structure</li> </ul>
6	Project Reviews show actual costs to date do not exceed planned costs to date by more than 10%.	<ul style="list-style-type: none"> <li>Earned Value Management</li> </ul>
7	Stakeholder acceptance meetings are held to verify and validate that project deliverables are within expectations.	<ul style="list-style-type: none"> <li>Deployment Plan</li> </ul>
8	Go/No Go meetings are held to verify and validate that project risks are being managed in accordance with the risk response strategies.	<ul style="list-style-type: none"> <li>Project Closeout Report</li> <li>Production Readiness Review</li> </ul>
9	Issues will be documented within 3 days and either closed or escalated in 15 days as indicated in the communication management plans.	<ul style="list-style-type: none"> <li>Issues Tracking</li> </ul>
10	A Project Close-Out Report is completed within 30 days after the project deployment.	<ul style="list-style-type: none"> <li>Closeout Plan</li> </ul>

### 5.3 Project Reviews and Assessments

Specify the types of project reviews that are directly related to project quality. Project reviews may include audits, verification and validation activities, peer reviews, quality reviews, use of milestone checklists, and requirement verification activities. For each review type specified, include the review frequency, tools used, reviewer(s), and the reports that will be generated as a result of the review. Reviewers may be identified as project organizational roles.

Based on project-specific methods, describe how the results of project reviews will be monitored, evaluated, and how variance to acceptable criteria will be reported and resolved. Describe project team roles involved in these activities.

### 5.4 Deliverables Acceptance Criteria

Acceptance of project deliverables from an overall quality perspective by project stakeholders is critical to successful project delivery. For each project deliverable, describe the final approval process for acceptance and the objective criteria to be used for stakeholder acceptance.

## 5.5 Process Improvement Activities

Describe the activities that will be performed periodically to assess the project's processes from an overall quality perspective, identify areas for improvement, and implement improvement plans.

If this project has a responsibility for defining, testing, or using a new agency and/or organizational process, state how that process is incorporated into project planning in the description.

# Section 6. Communication Management

The Communication Management section describes the methods and techniques for handling activities such as:

- Identifying project stakeholders
- Identifying the information that is to be exchanged between project stakeholders
- Ensuring timely and appropriate collection, generation, dissemination, storage, and ultimate disposition of project information among project stakeholders.

Communication is a major component of successful project delivery. Without effective communication, vital information may not be exchanged between the project team and other stakeholders. Lack of communication among project stakeholders may prohibit or delay the execution or completion of scheduled tasks.

## 6.1 Communication Management Approach

Describe the overall, high-level approach to communication management for the project. Summarize how the following communication management activities outlined in this Communication Management section will be accomplished *collectively*: project stakeholder identification, and project information collection, generation, dissemination, storage, and disposition. For example, identify and describe if a formal communication management organization and/or division governance process will be used. Describe if one or more teams will be formed to address a set of communication management activities such as a multi-agency stakeholder identification team or a communications information requirements team. Describe whether an independent, unbiased team external to the organization and/or agency will be used to help ensure effective management of communication.

If formal communication management policies and procedures have been established at the organization or agency level, refer to the agency and/or organizational practices. In the description, include tailoring of any practices to accommodate specific project needs if applicable.

## 6.2 Communication Stakeholders and Information Identification

Based on project-specific methods, describe how project stakeholders and information requirements are identified and organized in order to ensure timely and appropriate collection, generation, dissemination, storage, and ultimate disposition of project information among project

stakeholders. Project information is exchanged between stakeholders in order to keep stakeholders informed and enable fulfillment of project roles and responsibilities. For example, certain managers will need status information summarized in various forms. Steering committee members will need status reports in order to provide advice and recommendations.

Stakeholders may be internal or external to the organization. Stakeholders are affected by the actions and activities of the project, have influence or power over the project, and an interest in the project's success. The stakeholder's interest in terms of the stakeholder's specific area of interest and expectations for the project and project communications provides communicators with the insight to stakeholder's perspective. This perspective is needed to promote an understanding of how the communications or interactions in which stakeholders are involved, as individuals, affect other stakeholders and the project as a whole.

As a critical aspect of communication management, project stakeholders and information requirements are identified and updated in a Communication Register, or its equivalent, throughout the life of the project. A Communication Register is included as a Framework supplemental tool in the appendices. Note that an agency-equivalent Communication Register must include, at a minimum, the information identified in the Communication Register Framework supplemental tool.

In the Communication Register or its equivalent, identify stakeholder requirements for the project and associated information, including:

- Information requirement description or title
- Name of stakeholder responsible for providing the information
- Function the provider of the information represents
- Name of the stakeholder who is the recipient of the information
- Function the recipient of the information represents
- Timeframe, frequency, or trigger requirements for distribution
- Format requirements
- Medium and distribution method
- Storage requirements and disposition methods.

### **6.3 Distribution Groups**

Provide a reference to the location of the project distribution list information, or identify and describe distribution groups that will be used to distribute project information, including the distribution group name and owner.

## **Section 7. Configuration Management**

The Configuration Management (CM) section describes the approach for formally identifying and controlling project configuration items (CI). CIs may be intermediate or final outputs (e.g., executable systems, executable code components, source code components, user documentation, databases, test cases, test plans, specifications, project management artifacts,

data) and elements of the support environment (e.g., compilers, operating systems, tools, test beds).

CM is an integral function in delivering technology projects because it facilitates the protection of configuration items and communicates changes that have been made to them. CM, effectively planned and executed, contributes to the production of high quality technology products and avoidance of rework. CM activities include:

- Identifying project configuration items
- Controlling project CIs
- Maintaining the status of project CIs
- Verifying that project configuration information is accurate
- Coordinating changes among the project's CIs and interfacing items outside the scope of the project
- Incorporating acquired CIs and CIs for which a vendor has responsibility into the project's environment.

## 7.1 Configuration Management Approach

Describe the overall, high-level approach to configuration management for the project.

Summarize how the following configuration management activities outlined in this Configuration Management section will be accomplished *collectively*: configuration identification, control, status accounting and reporting, auditing and review, interface control, and vendor control. For example, identify and describe if a formal CM organization and/or division will be used. Identify if one or more teams will be formed to address a set of CM activities such as a configuration items identification team or a release management team. Identify whether an independent, unbiased CM team external to the organization and/or agency will be used to help ensure effective CM.

If formal CM policies and procedures have been established at the organization or agency level, refer to the agency and/or organization practices. In the description, include tailoring of any practices to accommodate specific project needs if applicable.

## 7.2 Configuration Management Tools, Environment, and Infrastructure

Describe the tools, environments, and infrastructure required for the execution of the project CM activities.

Tools can be CM-specific, such as source control tools, or generic products, such as spreadsheet packages or comparison programs. They can be standard organizational resources or can be specially acquired or built. Tools can be applied to library structure and access control; documentation development and tracking; source code control; baseline system generation; communication and authorization; change/problem tracking and status reporting; archiving, retention, and retrieval of controlled items; or the CM planning process itself.

Multiple environments can be required to address incremental evolution such as development and testing.

Specific infrastructure requirements can exist based on configuration tools and environments required.

### 7.3 Configuration Identification

Based on project-specific methods, describe the methods for identifying project configuration items (CI) and for placing CIs of the identified baselines under control. Project CIs include product configuration items, as well as project information, such as plans, schedules, and budget and cost information.

Methods include identifying:

- Events or characteristics that create the baseline
- Items controlled in the baseline
- How and where baselines are physically placed under control in controlled libraries
- Access control procedures
- Formatting, documentation, receiving, and inspection requirements
- Procedures for the actual storage of CIs, including the physical marking and labeling of items, data retention periods, and backup and recovery procedures.

Also include in the description how to retrieve and reproduce controlled items from library storage. Include verification of marking and labeling, tracking of controlled copies, and protection of proprietary and security information.

As a critical aspect of CM, project CIs are identified and updated in a Configuration Items Register, or its equivalent, throughout the life of the project. A Configuration Items Register may be referred to as a configuration items matrix, profile, list, or some other term. A Configuration Items Register is included as a Framework supplemental tool in the appendices. Note that an agency-equivalent Configuration Items Register must include, at a minimum, the information identified in the Configuration Items Register Framework supplemental tool.

In the Configuration Items Register or its equivalent, list the project configuration items. For each item, specify the:

- Description of the CI
- Naming convention for assigning unique identifiers to each item to be controlled
- Numbering convention for assigning a unique identifier to each version of each item to be controlled
- Type or classification of the CI (Examples of CI types include software developed in-house, commercial off-the-shelf software, hardware, and documentation.)
- Controlled library/repository where the CI will be stored.

Other attributes that may be specified for each CI include:

- Owner of the CI
- Relationships with other CIs

- Unique management requirements
- Management strategy for the CI
- Security requirements/considerations.

## 7.4 Configuration Control

Based on project-specific methods, describe how configuration control is imposed on the baselined CIs. Configuration control addresses activities to request, evaluate, approve or disapprove, and implement changes to the baselined CIs. Changes encompass error correction, enhancement, and incremental evolution. The degree of formality necessary for the change process depends on the CI affected and on the impact of the change within the configuration structure.

Include in the description activities for tracking and documenting the sequence of steps for each change requested to baselined CIs, such as:

- Identification and documentation of the need for a change
- Analysis and evaluation of a change request
- Approval or disapproval of a change request
- Escalation of a change request
- Verification, implementation, and release of changes.

Explicitly document any differences in handling changes based on the origin of the request.

Also include in the description procedures for establishing and changing the baseline, such as build and release procedures, and authorization required to approve baselines.

## 7.5 Status Accounting and Reporting

Describe the configuration status accounting and reporting activities.

Configuration status accounting and reporting methods include recording and reporting the status of the project's CIs. Configuration status accounting and reporting address the following:

- Information required to be tracked and reported for baselines and changes
- Types of status accounting reports to be generated and their frequency
- Information to be collected, stored, processed, and reported
- Requirements for securing the status data to be controlled
- Initial approved version of the configuration item
- Requirements for tracking the status of requested changes to the configuration item
- Implementation status of approved changes to the configuration item
- Documentation used to certify that project configuration items are ready for release, technical review, or approval
- Documentation of status records used to indicate project configuration items release, review, and approval schedule and status.

## 7.6 Auditing and Review

Describe the configuration audits and reviews to be held for the project's CIs. For each planned configuration audit or review, specify or provide a reference to:

- Purpose of the audit or review
- CIs under audit or review
- Schedule of audit or review tasks
- Procedures for conducting the audit or review
- Participants by job title
- Documentation required to be available for analysis or review, or to support the audit or review
- Procedure/requirements for recording audit results
- Approval criteria
- Action(s) to occur upon approval.

A configuration audit may be performed on a CI prior to its release or at any time thereafter. Configuration audits determine to what extent the actual CI reflects the required physical and functional characteristics. Configuration reviews are management tools for establishing a baseline.

At a minimum, the following audits and reviews should be conducted:

- Physical Configuration Audit, held just prior to release
- Physical Configuration Review, held just prior to release
- Functional Configuration Audit, held just prior to release
- Functional Configuration Review, held just prior to release

A Physical Configuration Audit is conducted to verify that a configuration item, as built, conforms to the technical documentation that defines it. A Physical Configuration Audit typically resembles an inventory analysis to assure that all and only the pertinent code components, files, configuration data, and documentation are contained in the configuration.

The Functional Configuration Audit is used to verify that the development of a configuration item has been completed satisfactorily, that the item has achieved the performance and functional characteristics specified in the requirements, and that its operational and support documents are complete and satisfactory.

## 7.7 Interface Control

Describe the interface control activities required to coordinate changes among the project's CIs and interfacing items outside the scope of the project. Include the external items to which the project's CIs interface. For each interface, specify:

- The nature of the interface
- The affected organizations
- How the relevant interface CIs will be controlled

- How the interface control documents are approved and released into a specified baseline.

For any Configuration Control Board established to control interfaces, identify its responsibilities and procedures.

## 7.8 Vendor Control

Describe the activities required to incorporate, into the controlled environment, configuration items for which a vendor has responsibility. Include in the description, how:

- CM requirements will be imposed on the vendor and become part of the vendor's agreement
- The vendor will be monitored for compliance
- The configuration items will be tested, verified, accepted, and merged with other project configuration items
- Proprietary items will be handled for security of information and traceability of ownership (e.g., copyright and royalties)
- Changes will be processed, including the vendor's participation.

# Section 8. Performance Management

The Performance Management section describes and outlines the approach for managing the product and/or service performance. The strategy involves identifying boundaries that impact performance measurement results, performance objectives, and performance standards and associated measurements for determining whether the performance objectives were satisfied. Note the performance of the actual project (as one aspect of quality) is described in the Quality Management section.

## 8.1 Performance Management Approach

Describe the overall, high-level approach to product and/or service performance management. Summarize how the following performance management activities outlined in this Performance Management section will be accomplished *collectively*: performance objectives and standards identification, monitoring, and control. For example, identify and describe if a formal performance management organization and/or division will be used. Identify if one or more teams will be formed to address a set of performance management activities such as a standards identification team or performance management team. Identify whether an independent, unbiased performance management team external to the organization and/or agency will be used to help ensure effective management of product and/or service performance.

If formal performance management policies and procedures have been established at the organization or agency level, refer to the agency and/or organizational practices. In the description, include tailoring of any practices to accommodate specific project needs if applicable.

Describe the scope of the performance management effort in relation to the project. The performance scope defines limits in terms of managing the performance of the goods and/or services. Although the project may deliver the goods and/or services, other products and/or



services (outside of the scope of the project) may impact performance outcomes. In some cases, products and/or services delivered by the project may be excluded from the scope of performance management and addressed external to the project.

## 8.2 Performance Objectives and Standards Identification

Based on project-specific methods, describe how performance objectives and standards are identified and organized in preparation for executing performance management. Performance objectives state how the desired quality results will be achieved. Identification of performance objectives and standards should begin early in the planning phase and must be managed throughout the life of the project. Performance objectives may be prioritized, for example, based on critical agency business directives.

As a critical aspect of performance management, performance objectives and standards are identified and updated in a Performance Register, or its equivalent, throughout the life of the project. A Performance Register may be referred to as a performance matrix, profile, list, or some other term. A Performance Register is included as a Framework supplemental tool in the appendices. Note that an agency-equivalent Performance Register must include, at a minimum, the information identified in the Performance Register Framework supplemental tool.

In the Performance Register or its equivalent, identify the overall performance objectives established for the project. Identify each project business objective that is directly related to the product or service being delivered by the project. The project *business* goals and objectives identified in the Business Case and refined in the Project Charter provide the basis for identifying the performance objectives. Identify product and/or service performance objectives that relate to the business goals and objectives established for the project. Performance objectives will be used to identify the performance standards by stating the desired outcome. If performance objectives have been established at the organization or agency level for all projects, refer to the agency and/or organizational performance objectives. Include project-specific performance objectives as needed.

In the Performance Register or its equivalent, identify performance standards and measurements for each of the performance objectives. Include standards and associated measurements for both the product and/or service as needed. Performance standards are used to measure the overall effectiveness of performance in areas such as quality, productivity, and response, regardless of whether a type of service is involved. A performance standard example is 99% overall system availability and an example measurement for that standard is total minutes of system down-time on a daily, weekly, and monthly basis.

Performance standards include service standards but not every performance standard is a service standard. For example, the installation of hardware as a contract deliverable does not impact services; however, using the installed hardware to provide a service may impact a service standard.

Service standards are used to measure the overall effectiveness of the vendor performance in terms of services provided. A service standard example is 80% of customer problem calls answered within 20 seconds and an example measurement for that standard is number of calls answered within how many seconds. Service standards are a subset of performance standards.

The performance standards may be subdivided into performance categories based on project needs. Add another column to indicate and identify performance standards categories if needed. A generic classification of project issue areas with their associated measurement categories and measures is provided as a Framework supplemental tool in the appendices.

Activities and methods for tracking, managing, and evaluating the performance of the product and/or services are critical to performance management. Methods for collecting the measurement data and responsibilities involved in the performance management effort are included.

In the Performance Register or its equivalent, identify how performance measurement data will be collected, reviewed, and reported. Examples of planned events and/or activities include:

- Project Status Meetings
- Review of Project Status Reports
- Quality Reviews
- Corrective Action Process
- Escalation of Corrective Action Requests
- Peer Reviews

For each performance measurement identify the:

- Collection method, including use of baseline values, source of the data, etc.
- Collection schedule
- Review method, including management and/or project team analysis
- Frequency of the review
- Which project organizational role has assigned responsibility for the collection and/or review methods
- Reports

## Section 9. Risk Management

The Risk Management section describes and outlines the approach for managing risks, including roles and activities, and methods and techniques. A consistent method for definition of activities and resources needed to assess and respond to project risks is critical to successful project delivery. Risk plans include methods for managing risks that emanate from the product, processes, resources, and constraints.

A key focus of risk management is to anticipate, identify, and address events or occurrences that, left unabated, could negatively impact the success of a project. Risk plans define work products and processes for assessing and controlling risks. These processes include risk assessment,

which comprises identifying, classifying, analyzing, and prioritizing risk; and risk monitoring and control, which comprises planning, tracking and reporting, reducing, and resolving risk.

## 9.1 Risk Management Approach

Describe the overall, high-level approach to risk management for the project. Summarize how the following risk management activities outlined in this Risk Management section will be accomplished *collectively*: risk identification, analysis, prioritization, response, monitoring, and control. For example, identify and describe if a formal risk management organization and/or division will be used. Describe if one or more teams will be formed to address a set of risk management activities such as a risk identification team or risk mitigation team. Describe whether an independent, unbiased risk management team external to the organization and/or agency will be used to help ensure effective management of project risks.

Refer to any risk management policies and procedures that exist within the organization and/or agency, including any risk management assumptions that are known and considered standard for the overall approach. Describe tailoring of any procedures to accommodate specific project needs if applicable.

## 9.2 Risk Assessment

The Risk Assessment section describes how risks are identified, categorized, analyzed, prioritized, and addressed. Risk assessment involves two primary activities: risk identification and risk analysis.

### 9.2.1 Risk Identification

Based on project-specific methods, describe how risks are identified and organized in preparation for performing risk analysis. Risk identification is the process of determining which risks might affect the project and documenting the characteristics of the risk. Risk identification should begin early in the planning phase and must continue throughout the life of the project. The following methods and techniques are often used to identify possible risks:

- Brainstorming
- Evaluations or inputs from project stakeholders
- Periodic reviews of project data
- Questionnaires based on taxonomy, the classification of product areas and disciplines
- Interviews based on taxonomy
- Analysis of the Work Breakdown Structure (WBS)

The process of risk identification is assisted by use of risk factor tables that capture indicators of commonly encountered risks. Risk factor tables for different kinds of technology projects are included as Framework supplemental tools in the appendices. Each risk factor table is organized by categories with cues (characteristics) to help identify when the factor is considered low, medium, or high risk for the project. Risk factor tables should be used to prompt initial thoughts of

risks for the project. Identify which risk factors are relevant to the project, and rate their potential for exposing risk to the project (low, medium, high).

A method for organizing the risks for analysis should be defined. The team may choose to decide which factors are relevant at what rating (low, medium, high) or some other approach for organizing the specific risks into sets that supports risk analysis. A classification may be used, for example, to determine which risks should be analyzed.

As a critical aspect of risk management, risks are identified and updated in a Risk Register, or its equivalent, throughout the life of the project. A Risk Register may be referred to as a risk matrix, profile, list, or some other term. A Risk Register is included as a Framework supplemental tool in the appendices. Note that an agency-equivalent Risk Register must include, at a minimum, the information identified in the Risk Register Framework supplemental tool.

The Risk Register includes information such as a unique identifier, risk statement, and conditions that may trigger the risk. The risk statement states clearly and concisely the context of the risk by identifying the event (e.g., customer submits changes to requirements after requirements are baselined) and consequence (e.g., changes could extend project delivery completion date). Initial development of the Risk Register begins during risk identification.

### **9.2.2 Risk Analysis**

Based on project-specific methods, describe how risks will be analyzed to establish the project exposure for each risk and to determine which risks are the most important ones to address. Risk analysis is the process of examining each risk to refine the risk statement, isolate the cause/trigger, quantify the probability of occurrence, and determine the nature and impact of possible effects. As a result of risk analysis, the risks in the Risk Register or its equivalent are rated and prioritized according to their probability of occurrence, degree of impact, and relationship to other risk areas. Risk analysis, and related updates to the Risk Register, is performed continuously throughout the life of the project as new risks are identified and the profile of current risks changes.

The process of risk analysis is assisted by determining the risk exposure (severity). The severity of a risk can be determined by multiplying the probability of the risk (event) actually occurring by the potential negative impact (consequence) to the project such as to cost, schedule, or performance. Risk analysis is assisted by use of a method that assigns risk ratings (very low, low, moderate, high, very high) to risks based on combining probability and impact scales. Different scales and ratings may be used.

For example, a risk's probability or impact scale, defined to fall between 0.0 (no probability) and 1.0 (certainty), is assigned as:

Risk Probability Scale	Risk Impact Scale	Rating
.1	.1	very low
.3	.3	low
.5	.5	moderate
.7	.7	high
.9	.9	very high

Once risks have been identified, and probability of occurrence and consequences assigned, the risk can be rated as to its severity. This facilitates ranking risks in priority order and deciding what level of resources to devote to each risk. Rating the severity of risks may also be based on other scales such as a controllability scale, in addition to probability and impact. The level of controllability would represent the extent to which the project team lacks control over the risk being realized. If the project team has a high degree of control over whether the risk is realized, then the lack of control is low and the associated risk is low. The less control the project team has, the higher the score.

For example, a risk's level of control scale, defined to fall between 0.0 (no probability) and 1.0 (certainty), is assigned as:

Risk Level of Control Scale	Description	Rating
.1	essentially avoidable	very high
.3	highly controllable	high
.5	moderately controllable	moderate
.7	largely uncontrollable	low
.9	uncontrollable	very low

Address what types of analysis are performed, how the results of the analysis are reviewed, and how decisions are made to accept or reject a risk in the risk analysis description. Explicitly describe methods and techniques used for scales such as to identify the probability and rank the project risks in order of priority based on ratings.

Describe any risk threshold values. Risk threshold values may be defined and used to identify when it may not be worth expending energy to track and monitor the risk on an active basis. This threshold (or tolerance level) could identify values for cost, schedule, staffing, resources, and quality that define whether the project must take action or if no action is required at that time if the event occurs. While these values are typically related to impact, probability, or severity, they may also be based on other factors, such as if more than five risks appear in a specific risk or program area, a threshold may need to be established to effectively manage the volume.

### 9.2.3 Risk Response Strategies

Based on project-specific methods, describe how risk response strategies are assigned for each risk. Assigning risk response strategies is the process of examining each risk and identifying one or more options to address the risk. As a result of assigning risk responses, the risks in the Risk Register or its equivalent are updated to reflect how the project plans to provide the appropriate response strategies for risk events based on the level of prioritization defined for the project. Only the highest ranked risk items may be included. Actions for implementing the response strategy, who is responsible for the actions (risk owner), and completion date of the actions may also be included in the Risk Register or its equivalent.

Descriptions of response strategies for risks that have a negative impact on the project follow:

- Accept the risk, with no investment of effort or cost. This is appropriate when the cost of responding to the risk exceeds the exposure, and the exposure is acceptable.
- Transfer the risk to someone else, or agree to share the risk. Essentially, the negative impact is shifted to a third party. If a customer or partner, for example, is better able to handle the risk, then transference is probably the most effective approach.
- Avoid the risk by funding and staffing the efforts to reduce the probability that the risk will become a problem. Such tasks might include providing additional staff to help develop the product, getting special training for members of the team, or following a dual development path for the whole project.
- Mitigate the risk by funding and staffing the efforts to reduce the loss associated with the risk should it become a problem. Examples might include keeping a backup local area network (LAN) operational during the deployment of a new network.
- Establish contingency plans for significant risks that cannot be mitigated or otherwise resolved. These contingency plans are executed only under certain predefined conditions. Contingency management, the additional work required to handle the risk, must be budgeted and planned if the contingency event or condition occurs. Events that establish a trigger point for execution of the contingency plan must be clearly defined.

Response strategies for risks that have a positive impact on the project include *exploit*—make sure the condition or event that is favorable to the project happens, *share*—jointly share ownership with a third party, *enhance*—increase the probability of occurrence and/or positive impacts, *accept*—do nothing, and *contingent*—execute plans only under certain predefined conditions.

## 9.3 Risk Monitoring and Control

The Risk Monitoring and Control section describes how new risks are identified, analyzed, and planned, existing risks are reanalyzed, trigger points for execution of contingency plans are monitored, and the execution and effectiveness of risk response strategies are reviewed and

evaluated. The risk monitoring and control process involves two primary activities: risk tracking and reporting.

### 9.3.1 Risk Tracking

Based on project-specific methods, describe how risks will be continually tracked to ensure that effective risk management is performed. Risk tracking is the process of continually monitoring for new and changing risks, updating the Risk Register, evaluating the effectiveness of risk response strategies to ensure risk conditions do not get out of control, and providing a basis for continuous improvement of the ongoing, iterative risk management process.

Indicate whether risk checklists are used to evaluate risk management activities. Risk Checklists are provided as Framework supplemental tools in the appendices. The Risk Initiation Checklist identifies items to consider when checking if risk management has been established appropriately. The Risk Progress Checklist identifies items to consider on a regular basis (e.g., monthly) to ensure the project remains focused on risk management, and new risks are identified and tracked. The Risk Completion Checklist identifies items to consider when a project completes, or when a major phase completes, to evaluate the risk management process and results. Evaluating risk management includes adding and/or removing risk factors based on lessons learned.

Include other methods and techniques for activities such as risk audits, trend analysis, and watch lists. Consider including how the project team will ensure that risk response strategies are keeping the risks under control, including monitor indicators to know when to invoke contingency plans or execute certain activities. Throughout the project, activities for addressing the risks should be tracked to ensure, at a minimum:

- Activities which should reduce the probability of occurrence are effective
- Activities which should reduce the loss associated with the risk are effective
- When risks have reached a trigger point for use of the contingency plan, the contingency plan is executed

### 9.3.2 Risk Reporting

Based on project-specific methods, describe techniques to review and present the status of project risks. Reports for review and examination of risk response strategies in a detailed manner (as a single risk item) may be used. A Risk Item report template is provided as a Framework supplemental tool in the appendices. The Risk Item report is used to provide a detailed status on each of the top 10 (or other count) ranked risk items that are assigned a risk response strategy. Only the highest ranked risk items may be included and reviewed. The report provides information such as:

- Schedule attainment on the strategy – did actions begin on the date planned?
- Completion date of the strategy – did actions complete as planned?
- Effort required – compare the amount of effort used for managing risks against project plans

Reports for review and examination of risk response strategies in a summarized manner (collection or risk items) may be used. A Risk Status report template is provided as a Framework supplemental tool in the appendices. The Risk Status report is used to provide a status of all project risks, including the rank for the current reporting period, the rank for the previous reporting period, number of times the risk is on the project status list, and a description of the risk response progress.

Reports generally provide summary information for risks that have been assigned response strategies such as mitigate, accept, transfer, or avoid, as well as those that require contingency plans.

## **Section 10. Project Transition**

### **10.1 Closeout Plan**

To consider closeout early in planning, summarize the plan for closing the project from an administrative, financial, and logistical perspective. If this project involves procurement, contract closeout is described in the Acquisition Plan. Administrative closure involves activities such as the preparation of administrative documentation, collection and disposition of project artifacts, and identification of lessons learned. Financial closure involves activities such as the completion and termination of financial budgetary aspects of the project. Logistical closure involves activities such as reassignment of project resources (e.g., staff, equipment). Refer to the Project Closeout Report Instructions for more information on what is addressed in a closeout plan.

### **10.2 Phase Closeout**

Depending on the project life cycle and execution of project activities, closure may occur at the end of each phase and at the end of the project. Closure consists of verifying the phase or project results (e.g., quality, status, performance reporting), briefly analyzing the accomplishments and lessons learned during the phase, and archiving appropriate project information at that point during project delivery for future reference. Describe phase closeout plans, if applicable.

## **Section 11. References**

Identify the information sources referenced in the Project Plan. List all documents and other sources of information referenced in the Project Plan and utilized in the project. Include for each the document number, title, date (mm/dd/yy), and author. Include references to authorizing documents for this project, such as the Project Charter and results of project information requests or marketing plans.

## **Section 12. Glossary**

Define all terms and acronyms required to interpret the Project Plan properly.



## **Section 13. Revision History**

Identify changes to the Project Plan.

## **Section 14. Appendices**

Include the required deliverables and any other relevant information.

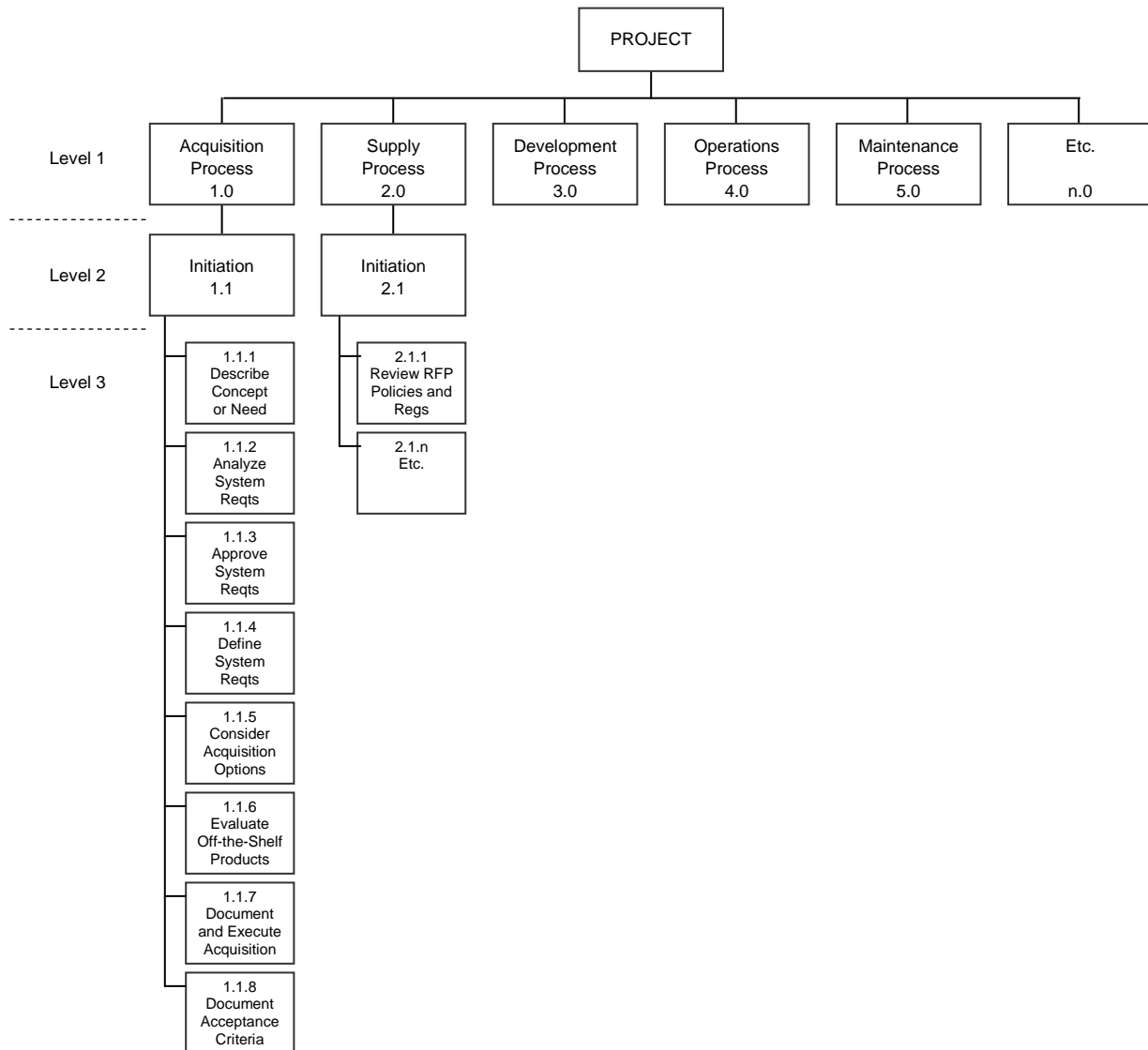
**Appendix A. Project Contact Register****PROJECT CONTACT REGISTER**

Project Contact Register				
Agency/Organization Name			Version Number	
Project Name			Revision Date mm/dd/yy	
Project Role/External Stakeholder Function	Name	Title	Email	Phone

## Appendix B. Work Breakdown Structure

A graphical representation of an example work breakdown structure (WBS) hierarchy, based on the Life Cycle Structure of IEEE/EIA 12207, is provided below. The numbered elements comprise work packages that detail the approach, needed resources, duration, work products, acceptance criteria, predecessors and successors. Ideally, the lowest level element represents a work effort that does not exceed 80 hours duration.

**Example Work Breakdown Structure of IEEE/EIA 12207**



A complete representation of the example WBS is provided in the table below.

<b>WBS Elements From the Life Cycle Structure of IEEE/EIA 12207</b>			
Project Name			
Prepared By			
Date mm/dd/yy			
Identifier	WBS Element	Include?	Your Label for This
<b>1.0</b>	<b>Acquisition Process</b>		
<b>1.1</b>	<b>Initiation</b>		
1.1.1	Describe concept or need		
1.1.2	Analyze system requirements		
1.1.3	Approve system requirements		
1.1.4	Define software requirements		
1.1.5	Consider acquisition options		
1.1.6	Evaluate off-the-shelf products		
1.1.7	Document and execute acquisition plan		
1.1.8	Document acceptance criteria		
<b>1.2</b>	<b>RFP Preparation</b>		
1.2.1	Document acquisition requirements (RFP)		
1.2.2	Tailor standards		
1.2.3	Define contract milestones and audits		
1.2.4	Give requirements to performer		
<b>1.3</b>	<b>Contract Prep and update</b>		
1.3.1	Establish selection procedure		
1.3.2	Select supplier based on evaluation		
1.3.3	Get inputs on tailoring this Standard		
1.3.4	Prepare and negotiate contract		
1.3.5	Negotiate changes to contract		
<b>1.4</b>	<b>Supplier Monitoring</b>		
1.4.1	Monitor supplier activities		
1.4.2	Cooperate with timely solutions		
<b>1.5</b>	<b>Acceptance and Completion</b>		
1.5.1	Define acceptance tests and procedures		
1.5.2	Conduct acceptance review and testing		
1.5.3	Perform CM after acceptance		
<b>2</b>	<b>Supply Process</b>		
<b>2.1</b>	<b>Initiation</b>		
2.1.1	Review RFP, policies, regulations		

Identifier	WBS Element	Include?	Your Label for This
2.1.2	Decide to bid, or accept contract		
<b>2.2</b>	<b>Preparation of Response</b>		
2.2.1	Prepare proposal in response to RFP		
<b>2.3</b>	<b>Contract</b>		
2.3.1	Negotiate and enter into contract		
2.3.2	Mod contract per change mechanism		
<b>2.4</b>	<b>Planning</b>		
2.4.1	Define management and QA		
2.4.2	Select a life cycle model		
2.4.3	Plan management, assurance, resources		
2.4.4	Evaluate make-buy decisions		
2.4.5	Document project management plans		
<b>2.5</b>	<b>Execution and Control</b>		
2.5.1	Execute project management plans		
2.5.2	Develop, operate or maintain per process		
2.5.3	Monitor progress, identify problems		
2.5.4	Control subcontractors per Acquisition Process		
2.5.5	Interface with IV&V and test agent		
2.5.6	Interface with others per contract and plans		
<b>2.6</b>	<b>Review and Evaluation</b>		
2.6.1	Coordinate contract reviews		
2.6.2	Support meetings, reviews, tests, audits		
2.6.3	Conduct V&V per this process		
2.6.4	Report evaluations, audits, tests to acquirer		
2.6.5	Provide access to facilities		
2.6.6	Perform QA		
<b>2.7</b>	<b>Delivery and Completion</b>		
2.7.1	Deliver the product per contract		
2.7.2	Support acquirer with product per contract		
<b>3</b>	<b>Development Process</b>		
<b>3.1</b>	<b>Process Implementation</b>		
3.1.1	Define software life cycle model		
3.1.2	Document and control outputs		
3.1.3	Select and use standards, tools and languages		
3.1.4	Document development plans		
3.1.5	Deliver all needed products		
<b>3.2</b>	<b>System Requirements Analysis</b>		

Identifier	WBS Element	Include?	Your Label for This
3.2.1	Specify system requirements		
3.2.2	Evaluate Requirements Against Criteria		
<b>3.3</b>	<b>System Architectural Design</b>		
3.3.1	Establish top-level architecture		
3.3.2	Evaluate architecture against criteria		
<b>3.4</b>	<b>Software Requirements Analysis</b>		
3.4.1	Document software requirements		
3.4.2	Evaluate requirements against criteria		
3.4.3	Conduct joint reviews		
<b>3.5</b>	<b>Software Architectural Design</b>		
3.5.1	Transform requirements into architecture		
3.5.2	Document top-level design for interfaces		
3.5.3	Document top-level design for database		
3.5.4	Document preliminary user documentation		
3.5.5	Document preliminary test requirements		
3.5.6	Evaluate architecture against criteria		
3.5.7	Conduct joint reviews		
<b>3.6</b>	<b>Software Detailed Design</b>		
3.6.1	Document design for each component		
3.6.2	Document design for interfaces		
3.6.3	Document design for database		
3.6.4	Update user documentation		
3.6.5	Document unit test requirements		
3.6.6	Update integration test requirements		
3.6.7	Evaluate detailed design against criteria		
3.6.8	Conduct joint reviews		
<b>3.7</b>	<b>Software Coding and Testing</b>		
3.7.1	Document each unit, database and tests		
3.7.2	Conduct and document unit testing		
3.7.3	Update user documentation		
3.7.4	Update integration test requirements		
3.7.5	Evaluate code and test results		
<b>3.8</b>	<b>Software Integration</b>		
3.8.1	Document integration plans		
3.8.2	Conduct and document integration tests		
3.8.3	Update user documentation		
3.8.4	Document qualification tests		

Identifier	WBS Element	Include?	Your Label for This
3.8.5	Evaluate plans and tests against criteria		
3.8.6	Conduct joint reviews		
<b>3.9</b>	<b>Software Qualification testing</b>		
3.9.1	Conduct and document qualification tests		
3.9.2	Update user documentation		
3.9.3	Evaluate tests against criteria		
3.9.4	Support audits		
3.9.5	Prepare product for next phase		
<b>3.10</b>	<b>System Integration</b>		
3.10.1	Integrate software with hardware and others		
3.10.2	Document integration tests		
3.10.3	Evaluate integrated system against criteria		
<b>3.11</b>	<b>System Qualification Testing</b>		
3.11.1	Conduct and document qualification tests		
3.11.2	Evaluate system against criteria		
3.11.3	Support audits		
3.11.4	Prepare product for installation		
<b>3.12</b>	<b>Software Installation</b>		
3.12.1	Plan installation in target environment		
3.12.2	Install software per plan		
<b>3.13</b>	<b>Software Acceptance Support</b>		
3.13.1	Support acquirer's acceptance tests		
3.13.2	Deliver product per contract		
3.13.3	Provide training per contract		
<b>4</b>	<b>Operations Process</b>		
<b>4.1</b>	<b>Process Implementation</b>		
4.1.1	Document operational activities		
4.1.2	Document problem tracking procedures		
4.1.3	Document product testing procedures		
<b>4.2</b>	<b>Operational Testing</b>		
4.2.1	Conduct operational testing		
4.2.2	Test software code and databases		
<b>4.3</b>	<b>System Operation</b>		
4.3.1	Operate per user documentation		
<b>4.4</b>	<b>User Support</b>		
4.4.1	Assist users as requested		
4.4.2	Track user requests		

Identifier	WBS Element	Include?	Your Label for This
4.4.3	Provide problem work-around solutions		
<b>5</b>	<b>Maintenance Process</b>		
5.1	<b>Process Implementation</b>		
5.1.1	Document maintenance activities		
5.1.2	Document problem tracking procedures		
5.1.3	Manage modifications to the system		
<b>5.2</b>	<b>Problem and Modification Analysis</b>		
5.2.1	Analyze problem reports		
5.2.2	Replicate or verify problems		
5.2.3	Develop modifications		
5.2.4	Document problems, analysis, fixes		
5.2.5	Get modifications approved per contract		
<b>5.3</b>	<b>Modification Implementation</b>		
5.3.1	Document where changes are needed		
5.3.2	Implement modifications		
<b>5.4</b>	<b>Maintenance Review/Acceptance</b>		
5.4.1	Review integrity of modified system		
5.4.2	Get approval for modifications per contract		
<b>5.5</b>	<b>Migration</b>		
5.5.1	Ensure products meet this standard		
5.5.2	Develop and execute Migration Plan		
5.5.3	Notify users of migration		
5.5.4	Conduct parallel operations if needed		
5.5.5	Notify all concerned, archive all records		
5.5.6	Perform post-op review of changes		
5.5.7	Keep data from old environment		
<b>5.6</b>	<b>Software Retirement</b>		
5.6.1	Document plans for retirement		
5.6.2	Notify all users of plans and activities		
5.6.3	Conduct parallel operations		
5.6.4	Notify all concerned, archive all records		
5.6.5	Keep data from retired product per contract		
<b>6</b>	<b>Documentation</b>		
<b>6.1</b>	<b>Process Implementation</b>		
6.1.1	Develop a documentation plan		
<b>6.2</b>	<b>Design and Development</b>		
6.2.1	Use applicable standards for documents		



Identifier	WBS Element	Include?	Your Label for This
6.2.2	Confirm source of input data		
6.2.3	Review and edit documents against standards		
<b>6.3</b>	<b>Production</b>		
6.3.1	Produce documents per plan		
6.3.2	Control per CM Process		
<b>6.4</b>	<b>Maintenance</b>		
6.4.1	Modify documents per CM Process		
<b>7</b>	<b>Configuration Management</b>		
<b>7.1</b>	<b>Process Implementation</b>		
7.1.1	Develop CM Plan		
<b>7.2</b>	<b>Configuration Identification</b>		
7.2.1	Establish scheme to identify software items		
<b>7.3</b>	<b>Configuration Control</b>		
<b>7.3.1</b>	<b>Manage change requests</b>		
7.3.1.1	Record change requests		
7.3.1.2	Evaluate change requests		
7.3.1.3	Approve change requests		
7.3.2	Keep audit trail		
7.3.3	Control access to items		
<b>7.4</b>	<b>Configuration Status Accounting</b>		
7.4.1	Maintain records and status reports		
<b>7.5</b>	<b>Configuration Evaluation</b>		
7.5.1	Ensure functional completeness of products		
<b>7.6</b>	<b>Release Management and Delivery</b>		
7.6.1	Control release and delivery of products and documentation		
<b>8</b>	<b>Quality Assurance</b>		
<b>8.1</b>	<b>Process Implementation</b>		
8.1.1	Establish QA process		
8.1.2	Coordinate with Verification, Validation, Joint Reviews and Audit Processes		
8.1.3	Develop QA Plan		
8.1.4	Schedule and execute QA tasks		
8.1.5	Make QA records available to acquirer		
8.1.6	Give QA team organizational freedom		
<b>8.2</b>	<b>Product Assurance</b>		
8.2.1	Assure plans are executed		
8.2.2	Assure products comply with contract		
8.2.3	Assure delivered products satisfy requirements		

Identifier	WBS Element	Include?	Your Label for This
<b>8.3</b>	<b>Process Assurance</b>		
8.3.1	Assure processes comply with contract		
8.3.2	Assure practices, tests, libraries comply		
8.3.3	Assure prime requirements are passed to subs		
8.3.4	Assure support provided per contract		
8.3.5	Assure measures performed per standards and procedures		
8.3.6	Assure staff is trained		
<b>8.4</b>	<b>Assurance of Quality Systems</b>		
8.4.1	Assure additional quality management activities are performed per ISO 9001, if required		
<b>9</b>	<b>Verification</b>		
<b>9.1</b>	<b>Process Implementation</b>		
9.1.1	Determine if verification effort needed		
9.1.2	If so, establish process		
9.1.3	Select independent verification organization		
9.1.4	Identify activities and products to verify		
9.1.5	Develop verification plan and procedures		
9.1.6	Implement verification plan		
<b>9.2</b>	<b>Verification</b>		
9.2.1	Verify contract against criteria		
9.2.2	Verify process against criteria		
9.2.3	Verify requirements against criteria		
9.2.4	Verify design against criteria		
9.2.5	Verify code against criteria		
9.2.6	Verify integration against criteria		
9.2.7	Verify documentation against criteria		
<b>10</b>	<b>Validation</b>		
<b>10.1</b>	<b>Process Implementation</b>		
10.1.1	Determine if validation effort needed		
10.1.2	If so, establish process		
10.1.3	Select validation organization		
10.1.4	Develop validation plan		
10.1.5	Implement validation plan		
<b>10.2</b>	<b>Validation</b>		
10.2.1	Prepare test requirements, cases, specs		
10.2.2	Ensure requirements met		
10.2.3	Conduct tests		
10.2.4	Validate that product satisfies intended use		

Identifier	WBS Element	Include?	Your Label for This
10.2.5	Test product in target environment		
<b>11</b>	<b>Joint Review</b>		
<b>11.1</b>	<b>Process Implementation</b>		
11.1.1	Hold periodic and ad hoc reviews		
11.1.2	Agree to resources needed		
11.1.3	Set agenda, products, scope, procedures		
11.1.4	Record problems detected		
11.1.5	Document and distribute results		
11.1.6	Agree on outcome and action items		
<b>11.2</b>	<b>Project Management Reviews</b>		
11.2.1	Evaluate status against plans, schedules		
<b>11.3</b>	<b>Technical Reviews</b>		
11.3.1	Evaluate products or services		
<b>12</b>	<b>Audit</b>		
<b>12.1</b>	<b>Process Implementation</b>		
12.1.1	Audit at predetermined milestones per plan		
12.1.2	Select independent auditors		
12.1.3	Agree to audit resources		
12.1.4	Agree on agenda, products, scope		
12.1.5	Record problems detected		
12.1.6	Document and distribute results		
12.1.7	Agree on outcome and action items		
<b>12.2</b>	<b>Audit</b>		
12.2.1	Conduct audits per criteria		
<b>13</b>	<b>Problem Resolution</b>		
<b>13.1</b>	<b>Process Implementation</b>		
13.1.1	Establish problem resolution process for handling problems in products and activities		
<b>13.2</b>	<b>Problem Resolution</b>		
13.2.1	Track problems through detection, analysis, and resolution		
<b>14</b>	<b>Management</b>		
<b>14.1</b>	<b>Initiation and Scope Definition</b>		
14.1.1	Establish the requirements for management		
14.1.2	Check resources: personnel, materials, etc.		
14.1.3	Modify requirements to achieve criteria		
<b>14.2</b>	<b>Planning</b>		
14.2.1	Plan efforts, schedules, tasks, duties, costs		
<b>14.3</b>	<b>Execution and Control</b>		

Identifier	WBS Element	Include?	Your Label for This
14.3.1	Implement plan to meet objectives		
14.3.2	Monitor process		
14.3.3	Investigate and resolve problems		
14.3.4	Report progress		
<b>14.4</b>	<b>Review and Evaluation</b>		
14.4.1	Ensure products and plans are evaluated		
14.4.2	Assess evaluation results		
<b>14.5</b>	<b>Closure</b>		
14.5.1	Determine when process is complete		
14.5.2	Check results for completeness		
<b>15</b>	<b>Infrastructure</b>		
<b>15.1</b>	<b>Process Implementation</b>		
15.1.1	Define infrastructure needed		
15.1.2	Plan and document infrastructure establishment		
<b>15.2</b>	<b>Establish Infrastructure</b>		
15.2.1	Document configuration of infrastructure		
15.2.2	Install infrastructure in time for process		
<b>15.3</b>	<b>Maintain Infrastructure</b>		
15.3.1	Maintain, monitor, modify infrastructure to satisfy requirements of process		
<b>16</b>	<b>Improvement</b>		
<b>16.1</b>	<b>Process Establishment</b>		
16.1.1	Establish organizational processes for software life cycle		
<b>16.2</b>	<b>Process Assessment</b>		
16.2.1	Develop process assessment procedure		
16.2.2	Review process for effectiveness		
<b>16.3</b>	<b>Process Improvement</b>		
16.3.1	Improve processes as needed		
16.3.2	Collect and analyze process data		
16.3.3	Collect and use quality cost data		
<b>17</b>	<b>Training</b>		
<b>17.1</b>	<b>Process Implementation</b>		
17.1.1	Determine training needs, develop plan		
<b>17.2</b>	<b>Training Material Development</b>		
17.2.1	Develop training presentation materials		
<b>17.3</b>	<b>Training Plan Implementation</b>		
17.3.1	Provide training to personnel, keep records		
<b>18</b>	<b>Tailoring</b>		

Identifier	WBS Element	Include?	Your Label for This
<b>18.1</b>	<b>Identify Project Environment</b>		
18.1.1	Identify model, activities, requirements, policies, strategies, criticality, etc.		
<b>18.2</b>	<b>Solicit Input</b>		
18.2.1	Solicit input from users, support personnel, bidders, etc.		
<b>18.3</b>	<b>Select Processes, Activities and Tasks</b>		
18.3.1	Decide on processes, activities and tasks		
18.3.2	Specify in contract others not in this Standard		
<b>18.4</b>	<b>Document Tailoring Decisions and Rationale</b>		
18.4.1	Document decisions and rationale		

## Appendix C. Change Control Request

### CHANGE CONTROL REQUEST

General Information			
Project Name			Date mm/dd/yy
Agency			
Contact	Phone	Email	Fax
Project Manager	Phone	Email	Fax

Change Request Definition
Description – Describe the proposed change.
Justification – Justify why the proposed changes should be implemented.
Impact of Not Implementing – Explain the impact if the proposed change is not implemented.
Alternatives – Provide at least three alternatives that could be implemented instead of the proposed change.

Change Request Analysis
<p>Check each that apply</p> <div style="display: flex; flex-wrap: wrap;"> <div style="width: 33%;"><input type="checkbox"/> Project Schedule</div> <div style="width: 33%;"><input type="checkbox"/> Configuration Item</div> <div style="width: 33%;"><input type="checkbox"/> Contract Amendment/Change Order</div> <div style="width: 33%;"><input type="checkbox"/> Project Costs</div> <div style="width: 33%;"><input type="checkbox"/> Project Scope</div> <div style="width: 33%;"><input type="checkbox"/> Major Deliverables/Outcomes</div> <div style="width: 33%;"><input type="checkbox"/> Technology</div> <div style="width: 33%;"><input type="checkbox"/> Roles/Responsibilities</div> </div> <p><i>Note: An approved Change Control Request MUST accompany the Contract Amendment and Change Order Approval if applicable.</i></p>
Impact Description – Describe the impact for each of the items checked.

Change Request Initial Review			
Review Date mm/dd/yy	Reviewer's Name	Reviewer's Project Role	Recommendation
			<input type="checkbox"/> Approve <input type="checkbox"/> Reject <input type="checkbox"/> Defer Until: [mm/dd/yy]
			<input type="checkbox"/> Approve <input type="checkbox"/> Reject <input type="checkbox"/> Defer Until: [mm/dd/yy]
Rationale for Recommendation – State the rationale for recommendation.			

Change Request Final Management Approval			
Final Approval Date mm/dd/yy	Name	Title	Recommendation
			<input type="checkbox"/> Approve <input type="checkbox"/> Reject
Special Instructions – Provide any additional information regarding the final recommendation.			

## Appendix D. Issues Tracking

### ISSUES TRACKING

General Information			
Issue Tracking Number (from Issue Log)			Modification Date mm/dd/yy
Project Name			Date mm/dd/yy
Agency			
Contact	Phone	Email	Fax
Project Manager	Phone	Email	Fax

Issue Background
Issue Type (check one): <input type="checkbox"/> Request for Information <input type="checkbox"/> System Problem <input type="checkbox"/> Procedural Problem <input type="checkbox"/> Other
Specify (Other):
Date Resolution Needed mm/dd/yy:
Proposed Assignee:
Attachments (if any):
Reviewer:
Reviewer Completion Date mm/dd/yy:
Reviewer Comments:

Issue Description

Impact and Option Analysis
Provide relevant information of areas impacted if the issue is not resolved and options or alternatives that may be considered in order to resolve the issue.



**Initial Recommendation**

Provide a recommended solution to the issue, and indicate why this resolution is supported.

--

**Cost /Schedule Impact Analysis Required?** ☐ Yes ☐ No**Estimate of Additional Effort****Resources Required****Work Days/Cost**


**Management Action**

Note: Any change in decision may require a modification to the Change Control Request information. Please cross-reference the change with the appropriate Change Control Request control number.

Review Date mm/dd/yy	Reviewer's Name	Reviewer's Role	Recommendation
			<input type="checkbox"/> Accept <input type="checkbox"/> Defer Until [mm/dd/yy] <input type="checkbox"/> Need Additional Information <input type="checkbox"/> Reject
			<input type="checkbox"/> Accept <input type="checkbox"/> Defer Until [mm/dd/yy] <input type="checkbox"/> Need Additional Information <input type="checkbox"/> Reject

**Final Recommendation and Rationale**

State the rationale for the recommendation.

Assigned To:
Organization
Planned Completion Date mm/dd/yy:

**Signatures**

The signatures of the people below relay an understanding in the purpose and content of this document by those signing it.

Name	Title	Signature	Date mm/dd/yy

## Appendix E. Project Status





































### PROJECT STATUS

General Information			
Project Name			Date mm/dd/yy
Agency			
Contact	Phone	Email	Fax
Project Manager	Phone	Email	Fax
Submitted To	Period Beginning mm/dd/yy	Period Ending mm/dd/yy	
Key Questions			Explanation (if Yes)
1. Has the project scope of work changed? <input type="checkbox"/> Yes <input type="checkbox"/> No			
2. Will upcoming target dates be missed? <input type="checkbox"/> Yes <input type="checkbox"/> No			
3. Does the team have resource constraints? <input type="checkbox"/> Yes <input type="checkbox"/> No			
4. Are there issues that require management attention? <input type="checkbox"/> Yes <input type="checkbox"/> No			




Project Metrics		
Measure	Numbers	Percentage
Tasks Complete	[13 of 54]	[24%]
Tasks in Progress	[26 of 54]	[48%]
Tasks not Started	[28 of 54]	[52%]
Time spent	[18 of 86 weeks]	[21%]
Time remaining	[68 of 86 weeks]	[79%]
[Project Specific Measure]		

**Summary Project Status**

Based on the color legend below, indicate green, yellow, or red for the reporting periods of each item. Any item classified as red or yellow requires an explanation in the comment boxes that follow this section. Additional priority items can be added to the list for status reporting.

Select one color in each of the Reporting Period columns to indicate your best assessment of:	Last Reporting Period [MM/DD/YY]			This Reporting Period [MM/DD/YY]		
1. Overall Project Status	 Red	 Yellow	 Green	 Red	 Yellow	 Green
2. Schedule	 Red	 Yellow	 Green	 Red	 Yellow	 Green
3. Budget (capital, overall project hours)	 Red	 Yellow	 Green	 Red	 Yellow	 Green
4. Scope	 Red	 Yellow	 Green	 Red	 Yellow	 Green
5. Quality	 Red	 Yellow	 Green	 Red	 Yellow	 Green
	 Red	 Yellow	 Green	 Red	 Yellow	 Green

**Color Legend**

	Red	Project has significant risk to baseline cost, schedule, or project deliverables. Current status requires immediate management involvement.
	Yellow	Project has a current or potential risk to baseline cost, schedule, or project deliverables. Project Manager will manage risks based on risk mitigation planning.
	Green	Project has no significant risk to baseline cost, schedule, or project deliverables.

Product and/or Service Performance				
Performance Standard	Meets	Exceeds	Below	Explanation

Milestones Planned and Accomplished			
Milestone	Original Date mm/dd/yy	Revised Date mm/dd/yy	Actual Date mm/dd/yy

**Milestones Planned and Not Accomplished**

For each item listed, provide a corresponding explanation of the effect of this missed item on other target dates and provide the plan to recover from this missed item.

Milestone	Original Date mm/dd/yy	Revised Date mm/dd/yy	Effect on Other Dates/Plan

**Milestones Planned for Next Period**

Milestone	Original Date mm/dd/yy	Revised Date mm/dd/yy

**Comparison of Budgeted to Actual Expenditures**

Use a chart like the following to show actual expenditures compared to planned levels. Break the costs into other categories as appropriate.

Fiscal Year [YYYY]

Budget Item	Actual Costs to Date	Estimate to Complete	Total Estimated Costs	Total Planned Budget
Salaries				
Contract Services				
Hardware				
Software				
Training				
Other Expenditures*				
Total Costs				

Other Expenditures include supplies, materials, etc.

Risks Management		
Major Risk Events	High/Medium/Low	Risk Mitigation

Additional Comments

**Appendix F. Quality Register****QUALITY REGISTER**

Quality Register			
Agency/Organization Name		Version Number	
Project Name		Revision Date mm/dd/yy	
No.	Quality Objective	Quality Standard	Tracking Tool or Measure

## Appendix G. Quality Project Areas, Categories, and Measures

The following table is a generic classification of IT project issue areas with their associated measurement categories and measures.

Common Project Issue Area	Category	Measure
Schedule and Progress	Milestone Performance	<ul style="list-style-type: none"> <li>• Milestone Dates</li> </ul>
	Work Unit Progress	<ul style="list-style-type: none"> <li>• Component Status</li> <li>• Requirement Status</li> <li>• Test Case Status</li> <li>• Critical Paths Tested</li> <li>• Problem Report Status</li> <li>• Reviews Completed</li> <li>• Change Request Status</li> </ul>
	Incremental Capability	<ul style="list-style-type: none"> <li>• Build Content – Component</li> <li>• Build Content – Function</li> </ul>
Resources and Cost	Personnel	<ul style="list-style-type: none"> <li>• Effort</li> <li>• Staff Experience</li> <li>• Staff Turnover</li> </ul>
	Financial Performance	<ul style="list-style-type: none"> <li>• Earned Value</li> <li>• Cost</li> </ul>
	Availability	<ul style="list-style-type: none"> <li>• Resource Availability Dates</li> <li>• Resource Utilization</li> </ul>
Growth and Stability	Product Size and Stability	<ul style="list-style-type: none"> <li>• Lines of Code</li> <li>• Components</li> <li>• Database Size</li> </ul>
	Functional Size and Stability	<ul style="list-style-type: none"> <li>• Requirements</li> <li>• Function Points</li> <li>• Change Request Workload</li> </ul>
Product Quality	Defects	<ul style="list-style-type: none"> <li>• Problem Reports</li> <li>• Defect Density</li> </ul>
	Complexity	<ul style="list-style-type: none"> <li>• Cyclomatic Complexity</li> </ul>
	Rework	<ul style="list-style-type: none"> <li>• Rework Size</li> <li>• Rework Effort</li> </ul>
Development Performance	Process Maturity	<ul style="list-style-type: none"> <li>• Capability Maturity Model Level</li> </ul>
	Productivity	<ul style="list-style-type: none"> <li>• Product Size/Effort Ratio</li> <li>• Functional Size/Effort Ratio</li> </ul>

## Appendix H. Communication Register

### COMMUNICATION REGISTER

Communication Register						
Agency/Organization Name				Version Number		
Project Name				Revision Date mm/dd/yy		
What?	Who?		When?	How?		
Information Requirement Description/Title	Provider/ Stakeholder	Recipient/ Stakeholder	Timeframe/ Frequency/ Trigger	Format	Medium/ Distribution Method	Storage/ Disposition Method



## Appendix I. Configuration Items Register

### CONFIGURATION ITEMS REGISTER

Configuration Items Register										
Agency/Organization Name						Version Number				
Project Name						Revision Date mm/dd/yy				
Name	Description	Item Naming Convention	Version Numbering Convention	Type/Classification	Controlled Library/Repository	Owner	Relationship with Other CIs	Unique Management Requirements	Management Strategy	Security Requirements/Considerations

## Appendix J. Performance Register

### PERFORMANCE REGISTER

Performance Register										
Agency/Organization Name							Version Number			
Project Name							Revision Date mm/dd/yy			
No.	Project Business Goal and Objective	Product and/or Service Performance Objective	Performance Standard	Performance Measurement	Performance Monitoring and Evaluation					
					Collection Method	Collection Schedule	Review Method	Frequency	Assigned To	Reports

## Appendix K. Performance Project Areas, Categories, and Measures

The following table is a generic classification of IT product and/or service issue areas with their associated measurement categories and measures.

Common Project Issue Area	Category	Measure
Service Quality	Efficiency	<ul style="list-style-type: none"> <li>Client Response Time</li> <li>Case Disposition Time</li> </ul>
	Effectiveness	<ul style="list-style-type: none"> <li>Pending Caseload Age</li> <li>Percentage of Clients Served</li> </ul>
Product Quality	Defects	<ul style="list-style-type: none"> <li>Problem Reports</li> <li>Defect Density</li> <li>Failure Intervals</li> </ul>
	Complexity	<ul style="list-style-type: none"> <li>Cyclomatic Complexity</li> <li>Bad Fix Complexity</li> </ul>
	Rework	<ul style="list-style-type: none"> <li>Rework Size</li> <li>Rework Effort</li> </ul>
	Security	<ul style="list-style-type: none"> <li>Data Overflow</li> <li>Injection Flaws</li> <li>Service Denial</li> </ul>
Technical Adequacy	Target Computer Resource Utilization	<ul style="list-style-type: none"> <li>CPU Utilization</li> <li>CPU Throughput</li> <li>I/O Utilization</li> <li>I/O Throughput</li> <li>Memory Utilization</li> <li>Storage Utilization</li> <li>Response Time</li> </ul>
	Technical Performance	<ul style="list-style-type: none"> <li>Achieved Accuracy in Requirements (Concurrent Tasking, Data Handling, Signal Processing, etc.)</li> </ul>
	Technology Impacts	<ul style="list-style-type: none"> <li>Quantitative Impact of New Technology (Non-developed Item Utilization, Size by Origin of Component, Cycle Time, etc.)</li> </ul>

## Appendix L. Risk Assessment Tables

The following are risk factor tables for all types of IT projects, software development and maintenance projects, projects involving acquisition of third party software, and projects involving outsourcing of some or all of the project's software development.

Each risk factor table is organized with the following columns:

- **Factor ID:** A sequentially assigned number for risk factors in this domain. When new factors are added, they get the next available sequential number, thus items within a category may not be in numerical order.
- **Risk Category:** Header that names the category in which the following risk factors belong.
- **Risk Factors:** Named areas of potential risk to projects in this domain.
- **Low Risk Cues:** Characteristics of this factor when it can be considered low risk to a project.
- **Medium Risk Cues:** Characteristics of this factor when it provides a medium risk to a project.
- **High Risk Cues:** Characteristics of this factor when it should be considered high risk to a project.
- **Rating:** Level of risk you think is true of this project.
  - Low – This project exhibits the low risk cue, or appears to have no risk in this area.
  - Medium – This project exhibits the medium risk cue, or something similar in threat.
  - High – This project exhibits the high risk cue, or something similar in threat.
  - Not Applicable – This factor is not applicable to this project.
  - Need Info – We need information from someone else (perhaps an expert) to make a judgment.
  - TBD – The project is not far enough along to make a rating; needs to be reviewed later.
- **Notes:** Space for notes during rating and for later reference on reasons a rating was chosen.

## L.1 GENERIC PROJECT RISK FACTORS

Generic Project Risk Factors											
Project Name											
Prepared By											
Date mm/dd/yy											
Version											
Factor ID	Risk Factors	Low Risk Cues	Medium Risk Cues	High Risk Cues	Low	Medium	High	Not applicable	Need info	TBD	Notes
<b>Risk Category: Mission and Goals</b>											
1	Project Fit to Customer Organization	directly supports customer organization mission and/or goals	indirectly impacts one or more goals of customer	does not support or relate to customer organization mission or goals							
2	Project Fit to Provider Organization	directly supports provider organization mission and/or goals	indirectly impacts one or more goals of provider	does not support or relate to provider organization mission or goals							
3	Customer Perception	customer expects this organization to provide this product	organization is working on project in area not expected by customer	project is mismatch with prior products or services of this organization							
4	Work Flow	little or no change to work flow	will change some aspect or have small affect on work flow	significantly changes the work flow or method of organization							
<b>Risk Category: Program Management (if project is part of a program)</b>											
5	Goals Conflict	goals of projects within the program are supportive of or complimentary to each other	goals of projects do not conflict, but provide little direct support	goals of projects are in conflict, either directly or indirectly							
6	Resource Conflict	projects within the program share resources without any conflict	projects within the program schedule resources carefully to avoid conflict	projects within the program often need the same resources at the same time (or compete for the same budget)							
7	Customer Conflict	multiple customers of the program have common needs	multiple customers of the program have different needs, but do not conflict	multiple customers of the program are trying to drive it in very different directions							

Factor ID	Risk Factors	Low Risk Cues	Medium Risk Cues	High Risk Cues	Low	Medium	High	Not applicable	Need info	TBD	Notes
8	Leadership	program has active program manager who coordinates projects	program has person or team responsible for program, but unable to spend enough time to lead effectively	program has no leader, or program manager concept is not in use							
9	Program Manager Experience	program manager has deep experience in the domain	program manager has some experience in domain, is able to leverage subject matter experts	program manager is new to the domain							
10	Definition of the Program	program is well-defined, with a scope that is manageable by this organization	program is well-defined, but unlikely to be handled by this organization	program is not well-defined or carries conflicting objectives in the scope							
<b>Risk Category: Decision Drivers</b>											
11	Political Influences	no particular politically-driven choices being made	project has several politically motivated decisions, such as using a vendor selected for political reasons, rather than qualifications	project has a variety of political influences or most decisions are made behind closed doors							
12	Convenient Date	date for delivery has been set by reasonable project commitment process	date is being partially driven by need to meet marketing demo, trade show, or other mandate not related to technical estimate	date is being totally driven by need to meet marketing demo, trade show, or other mandate; little consideration of project team estimates							
13	Use of Attractive Technology	technology selected has been in use for some time	project is being done in a sub-optimal way, to leverage the purchase or development of new technology	project is being done as a way to show a new technology or as an excuse to bring a new technology into the organization							

Factor ID	Risk Factors	Low Risk Cues	Medium Risk Cues	High Risk Cues	Low	Medium	High	Not applicable	Need info	TBD	Notes
14	Short Term Solution	project meets short term need without serious compromise to long term outlook	project is focused on short-term solution to a problem, with little understanding of what is needed in the long term	project team has been explicitly directed to ignore the long term outlook and focus on completing the short term deliverable							
<b>Risk Category: Organization Management</b>											
15	Organization Stability	little or no change in management or structure expected	some management change or reorganization expected	management or organization structure is continually or rapidly changing							
16	Organization Roles and Responsibilities	individuals throughout the organization understand their own roles and responsibilities and those of others	individuals understand their own roles and responsibilities, but are unsure who is responsible for work outside their immediate group	many in the organization are unsure or unaware of who is responsible for many of the activities of the organization							
17	Policies and Standards	development policies and standards are defined and carefully followed	development policies and standards are in place, but are weak or not carefully followed	no policies or standards, or they are ill-defined and unused							
18	Management Support	strongly committed to success of project	some commitment, not total	little or no support							
19	Executive Involvement	visible and strong support	occasional support, provides help on issues when asked	no visible support; no help on unresolved issues							
20	Project Objectives	verifiable project objectives, reasonable requirements	some project objectives, measures may be questionable	no established project objectives or objectives are not measurable							
<b>Risk Category: Customers/Users</b>											
21	User Involvement	users highly involved with project team, provide significant input	users play minor roles, moderate impact on system	minimal or no user involvement; little user input							

Factor ID	Risk Factors	Low Risk Cues	Medium Risk Cues	High Risk Cues	Low	Medium	High	Not applicable	Need info	TBD	Notes
22	User Experience	users highly experienced in similar projects; have specific ideas of how needs can be met	users have experience with similar projects and have needs in mind	users have no previous experience with similar projects; unsure of how needs can be met							
23	User Acceptance	users accept concepts and details of system; process is in place for user approvals	users accept most of concepts and details of system; process in place for user approvals	users do not accept any concepts or design details of system							
24	User Training Needs	user training needs considered; training in progress or plan in place	user training needs considered; no training yet or training plan is in development	requirements not identified or not addressed							
25	User Justification	user justification complete, accurate, sound	user justification provided, complete with some questions about applicability	no satisfactory justification for system							
<b>Risk Category: Project Characteristics</b>											
26	Project Size	small, non-complex, or easily decomposed	medium, moderate complexity, decomposable	large, highly complex, or not decomposable							
27	Reusable Components	components available and compatible with approach	components available, but need some revision	components identified, need serious modification for use							
28	Supplied Components	components available and directly usable	components work under most circumstances	components known to fail in certain cases, likely to be late, or incompatible with parts of approach							
29	Budget Size	sufficient budget allocated	questionable budget allocated	doubtful budget is sufficient							
30	Budget Constraints	funds allocated without constraints	some questions about availability of funds	allocation in doubt or subject to change without notice							
31	Cost Controls	well established, in place	system in place, weak in areas	system lacking or nonexistent							
32	Delivery Commitment	stable commitment dates	some uncertain commitments	unstable, fluctuating commitments							



Factor ID	Risk Factors	Low Risk Cues	Medium Risk Cues	High Risk Cues	Low	Medium	High	Not applicable	Need info	TBD	Notes
33	Development Schedule	team agrees that schedule is acceptable and can be met	team finds one phase of the plan to have a schedule that is too aggressive	team agrees that two or more phases of schedule are unlikely to be met							
<b>Risk Category: Product Content</b>											
34	Requirements Stability	little or no change expected to approved set (baseline)	some change expected against approved set	rapidly changing or no agreed-upon baseline							
35	Requirements Completeness and Clarity	all completely specified and clearly written	some requirements incomplete or unclear	some requirements only in the head of the customer							
36	Testability	product requirements easy to test, plans underway	parts of product hard to test, or minimal planning being done	most of product hard to test, or no test plans being made							
37	Design Difficulty	well defined interfaces; design well understood	unclear how to design, or aspects of design yet to be decided	interfaces not well defined or controlled; subject to change							
38	Implementation Difficulty	content is reasonable for this team to implement	content has elements somewhat difficult for this team to implement	content has components this team will find very difficult to implement							
39	System Dependencies	clearly defined dependencies of the project and other parts of system	some elements of the system are well understood and planned; others are not yet comprehended	no clear plan or schedule for how the whole system will come together							
<b>Risk Category: Deployment</b>											
40	Response or other Performance Factors	readily fits boundaries needed; analysis has been done	operates occasionally at boundaries	operates continuously at boundary levels							
41	Customer Service Impact	requires little change to customer service	requires minor changes to customer service	requires major changes to customer service approach or offerings							

Factor ID	Risk Factors	Low Risk Cues	Medium Risk Cues	High Risk Cues	Low	Medium	High	Not applicable	Need info	TBD	Notes
42	Data Migration Required	little or no data to migrate	much data to migrate, but good descriptions available of structure and use	much data to migrate; several types of data or no good descriptions of what is where							
43	Pilot Approach	pilot site (or team) available and interested in participating	pilot needs to be done with several sites (who are willing) or with one who needs much help	only available pilot sites are uncooperative or in crisis mode already							
<b>Risk Category: Development Process</b>											
44	Alternatives Analysis	analysis of alternatives complete, all considered, assumptions verifiable	analysis of alternatives complete, some assumptions questionable or alternatives not fully considered	analysis not completed, not all alternatives considered, or assumptions faulty							
45	Commitment Process	changes to commitments in scope, content, schedule are reviewed and approved by all involved	changes to commitments are communicated to all involved	changes to commitments are made without review or involvement of the team							
46	Quality Assurance Approach	QA system established, followed, effective	procedures established, but not well followed or effective	no QA process or established procedures							
47	Development Documentation	correct and available	some deficiencies, but available	nonexistent							
48	Use of Defined Development Process	development process in place, established, effective, followed by team	process established, but not followed or is ineffective	no formal process used							
49	Early Identification of Defects	peer reviews are incorporated throughout	peer reviews are used sporadically	team expects to find all defects with testing							
50	Defect Tracking	defect tracking defined, consistent, effective	defect tracking process defined, but inconsistently used	no process in place to track defects							
51	Change Control for Work Products	formal change control process in place, followed, effective	change control process in place, not followed or is ineffective	no change control process used							

Factor ID	Risk Factors	Low Risk Cues	Medium Risk Cues	High Risk Cues	Low	Medium	High	Not applicable	Need info	TBD	Notes
<b>Risk Category: Development Environment</b>											
52	Physical Facilities	little or no modification needed	some modifications needed; some existent	major modifications needed, or facilities nonexistent							
53	Tools Availability	in place, documented, validated	available, validated, some development needed (or minimal documentation)	unvalidated, proprietary or major development needed; no documentation							
54	Vendor Support	complete support at reasonable price and in needed time frame	adequate support at contracted price, reasonable response time	little or no support, high cost, and/or poor response time							
55	Contract Fit	contract with customer has good terms, communication with team is good	contract has some open issues which could interrupt team work efforts	contract has burdensome document requirements or causes extra work to comply							
56	Disaster Recovery	all areas following security guidelines; data backed up; disaster recovery system in place; procedures followed	some security measures in place; backups done; disaster recovery considered, but procedures lacking or not followed	no security measures in place; backup lacking; disaster recovery not considered							
<b>Risk Category: Project Management (PM)</b>											
57	PM Approach	product and process planning and monitoring in place	planning and monitoring need enhancement	weak or nonexistent planning and monitoring							
58	PM Experience	PM very experienced with similar projects	PM has moderate experience or has experience with different types of projects	PM has no experience with this type of project or is new to project management							
59	PM Authority	has line management or official authority that enables project leadership effectiveness	is able to influence those elsewhere in the organization, based on personal relationships	has little authority from location in the organization structure and little personal power to influence decision-making and resources							

Factor ID	Risk Factors	Low Risk Cues	Medium Risk Cues	High Risk Cues	Low	Medium	High	Not applicable	Need info	TBD	Notes
60	Support of the PM	complete support by team and of management	support by most of team, with some reservations	no visible support; manager in name only							
<b>Risk Category: Team Members</b>											
61	Team Member Availability	in place, little turnover expected; few interrupts for fire fighting	available, some turnover expected; some fire fighting	high turnover, not available; team spends most of time fighting fires							
62	Mix of Team Skills	good mix of disciplines	some disciplines inadequately represented	some disciplines not represented at all							
63	Team Communication	clearly communicates goals and status between the team and rest of organization	team communicates some of the information some of the time	rarely communicates clearly within team or to others who need to be informed							
64	Application Experience	extensive experience in team with projects like this	some experience with similar projects	little or no experience with similar projects							
65	Expertise with Application Area (Domain)	good background with application domain within development team	some experience with domain in team or able to call on experts as needed	no expertise in domain in team, no availability of experts							
66	Experience with Project Tools	high experience	average experience	low experience							
67	Experience with Project Process	high experience	average experience	low experience							
68	Training of Team	training plan in place, training ongoing	training for some areas not available or training planned for future	no training plan or training not readily available							
69	Team Spirit and Attitude	strongly committed to success of project; cooperative	willing to do what it takes to get the job done	little or no commitment to the project; not a cohesive team							
70	Team Productivity	all milestones met, deliverables on time, productivity high	milestones met, some delays in deliverables, productivity acceptable	productivity low, milestones not met, delays in deliverables							

Factor ID	Risk Factors	Low Risk Cues	Medium Risk Cues	High Risk Cues	Low	Medium	High	Not applicable	Need info	TBD	Notes
<b>Risk Category: Technology</b>											
71	Technology Match to Project	technology planned for project is good match to customers and problem	some of the planned technology is not well-suited to the problem or customer	selected technology is a poor match to the problem or customer							
72	Technology Experience of Project Team	good level of experience with technology	some experience with the technology	no experience with the technology							
73	Availability of Technology Expertise	technology experts readily available	experts available elsewhere in organization	will need to acquire help from outside the organization							
74	Maturity of Technology	technology has been in use in the industry for quite some time	technology is well understood in the industry	technology is leading edge, if not "bleeding edge" in nature							
<b>Risk Category: Maintenance and Support</b>											
75	Design Complexity	easily maintained	certain aspects difficult to maintain	extremely difficult to maintain							
76	Support Personnel	in place, experienced, sufficient in number	missing some areas of expertise	significant discipline or expertise missing							
77	Vendor Support	complete support at reasonable price and in needed time frame	adequate support at contracted price, reasonable response time	little or no support, high cost, and/or poor response time							
		<b>Total Categories</b>	<b>14</b>								
		<b>Total Factors</b>	<b>77</b>								

## L.2 GENERIC SOFTWARE PROJECT RISK FACTORS

Generic Software Risk Factors											
Project Name											
Prepared By											
Date mm/dd/yy											
Version											
Factor ID	Risk Factors	Low Risk Cues	Medium Risk Cues	High Risk Cues	Low	Medium	High	Not applicable	Need info	TBD	Notes
<b>Risk Category: Mission and Goals</b>											
1	Project Fit to Customer Organization	directly supports customer organization mission and/or goals	indirectly impacts one or more goals of customer	does not support or relate to customer organization mission or goals							
2	Project Fit to Provider Organization	directly supports provider organization mission and/or goals	indirectly impacts one or more goals of provider	does not support or relate to provider organization mission or goals							
3	Customer Perception	customer expects this organization to provide this product	organization is working on project in area not expected by customer	project is mismatch with prior products or services of this organization							
4	Work Flow	little or no change to work flow	will change some aspect or have small affect on work flow	significantly changes the work flow or method of organization							
<b>Risk Category: Program Management</b>											
5	Goals Conflict	goals of projects within the program are supportive of or complimentary to each other	goals of projects do not conflict, but provide little direct support	goals of projects are in conflict, either directly or indirectly							
6	Resource Conflict	projects within the program share resources without any conflict	projects within the program schedule resources carefully to avoid conflict	projects within the program often need the same resources at the same time (or compete for the same budget)							
7	Customer Conflict	multiple customers of the program have common needs	multiple customers of the program have different needs, but do not conflict	multiple customers of the program are trying to drive it in very different directions							

Factor ID	Risk Factors	Low Risk Cues	Medium Risk Cues	High Risk Cues	Low	Medium	High	Not applicable	Need info	TBD	Notes
8	Leadership	program has active program manager who coordinates projects	program has person or team responsible for program, but unable to spend enough time to lead effectively	program has no leader, or program manager concept is not in use							
9	Program Manager Experience	program manager has deep experience in the domain	program manager has some experience in domain, is able to leverage subject matter experts	program manager is new to the domain							
10	Definition of the Program	program is well-defined, with a scope that is manageable by this organization	program is well-defined, but unlikely to be handled by this organization	program is not well-defined or carries conflicting objectives in the scope							
<b>Risk Category: Decision Drivers</b>											
11	Political Influences	no particular politically-driven choices being made	project has several politically motivated decisions, such as using a vendor selected for political reasons, rather than qualifications	project has a variety of political influences or most decisions are made behind closed doors							
12	Convenient Date	date for delivery has been set by reasonable project commitment process	date is being partially driven by need to meet marketing demo, trade show, or other mandate not related to technical estimate	date is being totally driven by need to meet marketing demo, trade show, or other mandate; little consideration of project team estimates							
13	Attractive Technology	technology selected has been in use for some time	project is being done in a sub-optimal way, to leverage the purchase or development of new technology	project is being done as a way to show a new technology or as an excuse to bring a new technology into the organization							
14	Short Term Solution	project meets short term need without serious compromise to long term outlook	project is focused on short-term solution to a problem, with little understanding of what is needed in the long term	project team has been explicitly directed to ignore the long term outlook and focus on completing the short term deliverable							

Factor ID	Risk Factors	Low Risk Cues	Medium Risk Cues	High Risk Cues	Low	Medium	High	Not applicable	Need info	TBD	Notes
<b>Risk Category: Organization Management</b>											
15	Organization Stability	little or no change in management or structure expected	some management change or reorganization expected	management or organization structure is continually or rapidly changing							
16	Organization Roles and Responsibilities	individuals throughout the organization understand their own roles and responsibilities and those of others	individuals understand their own roles and responsibilities, but are unsure who is responsible for work outside their immediate group	many in the organization are unsure or unaware of who is responsible for many of the activities of the organization							
17	Policies and Standards	development policies and standards are defined and carefully followed	development policies and standards are in place, but are weak or not carefully followed	no policies or standards, or they are ill-defined and unused							
18	Management Support	strongly committed to success of project	some commitment, not total	little or no support							
19	Executive Involvement	visible and strong support	occasional support, provides help on issues when asked	no visible support; no help on unresolved issues							
20	Project Objectives	verifiable project objectives, reasonable requirements	some project objectives, measures may be questionable	no established project objectives or objectives are not measurable							
<b>Risk Category: Customer/User</b>											
21	User Involvement	users highly involved with project team, provide significant input	users play minor roles, moderate impact on system	minimal or no user involvement; little user input							
22	User Experience	users highly experienced in similar projects; have specific ideas of how needs can be met	users have experience with similar projects and have needs in mind	users have no previous experience with similar projects; unsure of how needs can be met							
23	User Acceptance	users accept concepts and details of system; process is in place for user approvals	users accept most of concepts and details of system; process in place for user approvals	users do not accept any concepts or design details of system							



Factor ID	Risk Factors	Low Risk Cues	Medium Risk Cues	High Risk Cues	Low	Medium	High	Not applicable	Need info	TBD	Notes
24	User Training Needs	user training needs considered; training in progress or plan in place	user training needs considered; no training yet or training plan is in development	requirements not identified or not addressed							
25	User Justification	user justification complete, accurate, sound	user justification provided, complete with some questions about applicability	no satisfactory justification for system							
<b>Risk Category: Project Parameters</b>											
26	Project Size	small, non-complex, or easily decomposed	medium, moderate complexity, decomposable	large, highly complex, or not decomposable							
27	Hardware Constraints	little or no hardware-imposed constraints or single platform	some hardware-imposed constraints; several platforms	significant hardware-imposed constraints; multiple platforms							
28	Reusable Components	components available and compatible with approach	components available, but need some revision	components identified, need serious modification for use							
29	Supplied Components	components available and directly usable	components work under most circumstances	components known to fail in certain cases, likely to be late, or incompatible with parts of approach							
30	Budget Size	sufficient budget allocated	questionable budget allocated	doubtful budget is sufficient							
31	Budget Constraints	funds allocated without constraints	some questions about availability of funds	allocation in doubt or subject to change without notice							
32	Cost Controls	well established, in place	system in place, weak in areas	system lacking or nonexistent							
33	Delivery Commitment	stable commitment dates	some uncertain commitments	unstable, fluctuating commitments							
34	Development Schedule	team agrees that schedule is acceptable and can be met	team finds one phase of the plan to have a schedule that is too aggressive	team agrees that two or more phases of schedule are unlikely to be met							

Factor ID	Risk Factors	Low Risk Cues	Medium Risk Cues	High Risk Cues	Low	Medium	High	Not applicable	Need info	TBD	Notes
<b>Risk Category: Product Content</b>											
35	Requirements Stability	little or no change expected to approved set (baseline)	some change expected against approved set	rapidly changing or no agreed-upon baseline							
36	Requirements Complete and Clear	all completely specified and clearly written	some requirements incomplete or unclear	some requirements only in the head of the customer							
37	Testability	product requirements easy to test, plans underway	parts of product hard to test, or minimal planning being done	most of product hard to test, or no test plans being made							
38	Design Difficulty	well defined interfaces; design well understood	unclear how to design, or aspects of design yet to be decided	interfaces not well defined or controlled; subject to change							
39	Implementation Difficulty	algorithms and design are reasonable for this team to implement	algorithms and/or design have elements somewhat difficult for this team to implement	algorithms and/or design have components this team will find very difficult to implement							
40	System Dependencies	clearly defined dependencies of the software effort and other parts of system (hardware, process changes, documentation, ...)	some elements of the system are well understood and planned; others are not yet comprehended	no clear plan or schedule for how the whole system will come together							
<b>Risk Category: Deployment</b>											
41	Hardware Resources for Deliverables	mature, growth capacity in system, flexible	available, some growth capacity	no growth capacity, inflexible							
42	Response or other Performance Factors	readily fits boundaries needed; analysis has been done	operates occasionally at boundaries	operates continuously at boundary levels							
43	Customer Service Impact	requires little change to customer service	requires minor changes to customer service	requires major changes to customer service approach or offerings							

Factor ID	Risk Factors	Low Risk Cues	Medium Risk Cues	High Risk Cues	Low	Medium	High	Not applicable	Need info	TBD	Notes
44	Data Migration Required	little or no data to migrate	much data to migrate, but good descriptions available of structure and use	much data to migrate; several types of databases or no good descriptions of what is where							
45	Pilot Approach	pilot site (or team) available and interested in participating	pilot needs to be done with several sites (who are willing) or with one who needs much help	only available pilot sites are uncooperative or in crisis mode already							
46	External Hardware or Software Interfaces	little or no integration or interfaces needed	some integration or interfaces needed	extensive interfaces required							
<b>Risk Category: Development Process</b>											
47	Alternatives Analysis	analysis of alternatives complete, all considered, assumptions verifiable	analysis of alternatives complete, some assumptions questionable or alternatives not fully considered	analysis not completed, not all alternatives considered, or assumptions faulty							
48	Commitment Process	changes to commitments in scope, content, schedule are reviewed and approved by all involved	changes to commitments are communicated to all involved	changes to commitments are made without review or involvement of the team							
49	Quality Assurance Approach	QA system established, followed, effective	procedures established, but not well followed or effective	no QA process or established procedures							
50	Development Documentation	correct and available	some deficiencies, but available	nonexistent							
51	Use of Defined Engineering Process	development process in place, established, effective, followed by team	process established, but not followed or is ineffective	no formal process used							
52	Early Identification of Defects	peer reviews are incorporated throughout	peer reviews are used sporadically	team expects to find all defects with testing							
53	Defect Tracking	defect tracking defined, consistent, effective	defect tracking process defined, but inconsistently used	no process in place to track defects							

Factor ID	Risk Factors	Low Risk Cues	Medium Risk Cues	High Risk Cues	Low	Medium	High	Not applicable	Need info	TBD	Notes
54	Change Control for Work Products	formal change control process in place, followed, effective	change control process in place, not followed or is ineffective	no change control process used							
<b>Risk Category: Development Environment</b>											
55	Physical Facilities	little or no modification needed	some modifications needed; some existent	major modifications needed, or facilities nonexistent							
56	Hardware Platform	stable, no changes expected, capacity is sufficient	some changes under evolution, but controlled	platform under development along with software							
57	Tools Availability	in place, documented, validated	available, validated, some development needed (or minimal documentation)	unvalidated, proprietary or major development needed; no documentation							
58	Vendor Support	complete support at reasonable price and in needed time frame	adequate support at contracted price, reasonable response time	little or no support, high cost, and/or poor response time							
59	Contract Fit	contract with customer has good terms, communication with team is good	contract has some open issues which could interrupt team work efforts	contract has burdensome document requirements or causes extra work to comply							
60	Disaster Recovery	all areas following security guidelines; data backed up; disaster recovery system in place; procedures followed	some security measures in place; backups done; disaster recovery considered, but procedures lacking or not followed	no security measures in place; backup lacking; disaster recovery not considered							
<b>Risk Category: Project Management</b>											
61	PM Approach	product and process planning and monitoring in place	planning and monitoring need enhancement	weak or nonexistent planning and monitoring							
62	PM Communication	clearly communicates goals and status between the team and rest of organization	communicates some of the information some of the time	rarely communicates clearly to the team or to others who need to be informed of team status							

Factor ID	Risk Factors	Low Risk Cues	Medium Risk Cues	High Risk Cues	Low	Medium	High	Not applicable	Need info	TBD	Notes
63	PM Experience	PM very experienced with similar projects	PM has moderate experience or has experience with different types of projects	PM has no experience with this type of project or is new to project management							
64	PM Attitude	strongly committed to success	willing to do what it takes	cares very little about project							
65	PM Authority	has line management or official authority that enables project leadership effectiveness	is able to influence those elsewhere in the organization, based on personal relationships	has little authority from location in the organization structure and little personal power to influence decision-making and resources							
66	Support of the PM	complete support by team and of management	support by most of team, with some reservations	no visible support; manager in name only							
<b>Risk Category: Project Team</b>											
67	Team Member Availability	in place, little turnover expected; few interrupts for fire fighting	available, some turnover expected; some fire fighting	high turnover, not available; team spends most of time fighting fires							
68	Mix of Team Skills	good mix of disciplines	some disciplines inadequately represented	some disciplines not represented at all							
69	Application Experience	extensive experience in team with projects like this	some experience with similar projects	little or no experience with similar projects							
70	Experience with Project Hardware and Software	high experience	average experience	low experience							
71	Experience with Process	extensive experience with this process	some experience with this process or extensive experience with another	little or no experience with a defined process							
72	Training of Team	training plan in place, training ongoing	training for some areas not available or training planned for future	no training plan or training not readily available							

Factor ID	Risk Factors	Low Risk Cues	Medium Risk Cues	High Risk Cues	Low	Medium	High	Not applicable	Need info	TBD	Notes
73	Team Spirit and Attitude	strongly committed to success of project; cooperative	willing to do what it takes to get the job done	little or no commitment to the project; not a cohesive team							
74	Team Productivity	all milestones met, deliverables on time, productivity high	milestones met, some delays in deliverables, productivity acceptable	productivity low, milestones not met, delays in deliverables							
75	Expertise with Application Area (Domain)	good background with application domain within development team	some experience with domain in team or able to call on experts as needed	no expertise in domain in team, no availability of experts							
<b>Risk Category: Technology</b>											
76	Technology Match to Project	technology planned for project is good match to customers and problem	some of the planned technology is not well-suited to the problem or customer	selected technology is a poor match to the problem or customer							
77	Technology Experience of Project Team	good level of experience with technology	some experience with the technology	no experience with the technology							
78	Availability of Technology Expertise	technology experts readily available	experts available elsewhere in organization	will need to acquire help from outside the organization							
79	Maturity of Technology	technology has been in use in the industry for quite some time	technology is well understood in the industry	technology is leading edge, if not "bleeding edge" in nature							
<b>Risk Category: Maintenance</b>											
80	Design Complexity	structurally maintainable (low complexity measured or projected)	certain aspects difficult to maintain (medium complexity)	extremely difficult to maintain (high complexity)							
81	Support Personnel	in place, experienced, sufficient in number	missing some areas of expertise	significant discipline or expertise missing							
82	Vendor Support	complete support at reasonable price and in needed time frame	adequate support at contracted price, reasonable response time	little or no support, high cost, and/or poor response time							

Factor ID	Risk Factors	Low Risk Cues	Medium Risk Cues	High Risk Cues	Low	Medium	High	Not applicable	Need info	TBD	Notes
		<b>Total Categories</b>	<b>14</b>								
		<b>Total Factors</b>	<b>82</b>								

### L.3 PACKAGED SYSTEMS RISK FACTORS

Packaged Systems Risk Factors											
Project Name											
Prepared By											
Date mm/dd/yy											
Version											
Factor ID	Risk Factors	Low Risk Cues	Medium Risk Cues	High Risk Cues	Low	Medium	High	Not applicable	Need info	TBD	Notes
<b>Risk Category: Package Selection</b>											
1	Effort expected	management understands that the packaged system may need augmentation; willing to allocate funds	management expects that packaged system will require only small amounts of evolution by their staff	management expects package to plug and play with no changes							
2	Price basis	package selected with knowledge of full product life cycle costs	package selected because it was a good value for the price	package selected as lowest cost alternative							
3	Level of technical evaluation	package and several other alternatives were used and reviewed by technical specialists and stakeholders	package and alternatives were reviewed from marketing literature	package examined by a small team of technical experts, who recommended it, without looking at alternatives							
4	End user involvement in evaluation	end users were directly involved in product evaluation	end users reviewed the results of the product evaluation	end users were not involved in the product evaluation							
5	Executive influence	executives have expressed no written or verbal support for any particular package/vendor	executives have made written or verbal comments favoring a particular package/vendor	executives have made a written or verbal mandate of a particular package/vendor							
6	Best practice assessment	business processes defined in package were assessed against industry best practices by package evaluation team	vendor assessed business processes against industry best practices	no assessment of business processes defined in package							



Factor ID	Risk Factors	Low Risk Cues	Medium Risk Cues	High Risk Cues	Low	Medium	High	Not applicable	Need info	TBD	Notes
7	Documented business process	business process is well documented to allow for comparison to package	business process documentation is out of date or abstract	process is undocumented so comparison to package is not possible							
8	Number of user areas or decision makers	1-3 user areas or decision makers	4-6 user areas or decision makers	>7 user areas or decision makers							
9	Well defined requirements	product evaluation was based on well defined requirements	requirements defined at an abstract level	no defined requirements for product evaluation							
10	Prioritized requirements	requirements were clearly rated and ranked	requirements were rated but not ranked	requirements were not rated and ranked							
11	Selected requirements discriminate between packages	requirements provide product discrimination factors to be used in evaluation process	requirements primarily provide features present in all evaluated products	no product features provided in requirements							
12	Measurable requirements	requirements are measurable to allow for accurate assessment of evaluation criteria	some requirements are measurable, some are difficult to assess	requirements are not measurable							
13	Selection process documentation	the evaluation and selection process follows an approved, documented organization standard for package evaluation and selection	the evaluation and selection process follows a documented process	no documented evaluation and selection process exists							
14	Evaluation criteria	package evaluation criteria were developed based on defined requirements	packages evaluated using vendor-defined evaluation criteria	no evaluation criteria used in package selection process							
15	Evaluation test cases	packages evaluated using test cases based on defined requirements or prior system functions	packages evaluated using vendor-defined test cases	no test cases used in evaluation process							

Factor ID	Risk Factors	Low Risk Cues	Medium Risk Cues	High Risk Cues	Low	Medium	High	Not applicable	Need info	TBD	Notes
16	Use of actual data	test cases used in evaluation process used actual data from a live system	test cases used in evaluation process used canned data from a test environment	test cases used in evaluation process used canned data from vendor							
17	Cost/benefit analysis	analysis of costs and benefits of package implementation follows an approved, documented organization standard	cost analysis is done, but benefits are ill-defined or not defined at all	the package will be purchased irrespective of any cost/benefit analysis							
18	Relative cost of product	product is mature and competitive in price	product has some competitors and cost is competitive	product is early in market and high cost, there is a threat of low cost entry of later products							
19	Possible increase in costs	low probability of cost increases during implementation	some probability of cost increases	high probability of cost increases during implementation							
<b>Risk Category: Package Match to User Needs</b>											
20	User familiarity with another solution	users have widespread familiarity with a common alternative to this package	some users have experience with an alternative and expect similar capabilities in this solution	some (perhaps vocal) users have had good experience with a competitive package; don't want this one							
21	Executive support of process changes	there is strong executive support for business process changes as a result of package implementation	executives are indifferent to need for business process changes	active opposition from executives to process changes							
22	Key user participation in process change	key users are participating in defining the business processes changes due to package implementation	key users are indirectly involved in defining business process changes	no key users are involved							
23	Match to Architectures	features of packaged system fit organization architectures well (application, technology, data)	some elements of architecture are not addressed well	packaged system is mismatch with significant elements of local architectures							

Factor ID	Risk Factors	Low Risk Cues	Medium Risk Cues	High Risk Cues	Low	Medium	High	Not applicable	Need info	TBD	Notes
24	Match to Documented Process	package was selected after processes were documented and/or redesigned; fits well	package selected while processes under definition; some mismatches to process, which must be changed	significant mismatch to elements of existing process, or process is undocumented so that comparison is not possible							
<b>Risk Category: Package Budget</b>											
25	Budget basis	budget based on early analysis of this alternative solution	budget set during analysis of alternative solutions, without specifics about this one	budget based on what is available, not considering how this package will be implemented							
26	Life Cycle Support	budget includes support for at least first several years of use	budget includes marginal support for a year from internal personnel	budget includes no funds for work other than implementation							
27	Embedded products	budget includes funds for purchase and support of embedded products	budget includes funds for purchase of embedded products, but no other associated costs	budget was set without regard to costs of embedded products							
<b>Risk Category: Package Implementation</b>											
28	Not Invented Here(NIH) Factor	little concern in organization about whether solution is built or bought	some in organization prefer building own solutions, for ease of extension and support	strong culture for building their own solutions; if "not invented here," solutions are mistrusted							
29	Development approach	development approach in use supports packaged system deployment	project is adapting a custom system development approach	no development approach defined							
30	Team Prepared for Procurement	project team has experience with system procurement and integration	work with packaged systems is new to this group, but advice is being provided by experts	only member of team with experience in packaged systems is provider of system							

Factor ID	Risk Factors	Low Risk Cues	Medium Risk Cues	High Risk Cues	Low	Medium	High	Not applicable	Need info	TBD	Notes
31	Staff experience with the package	members of the development team have extensive experience with the package	members of the development team have limited experience with the package, or experienced assistance is available	members of the development team have no experience with the package or there is no experienced assistance available							
32	Plan for integration and systems testing	adequate time has been allotted for integration and system testing (often underestimated)	the schedule for integration and system testing is tight	very little time has been allocated for integration and system testing							
33	Early integration testing	early integration testing is planned to prevent schedule slips due to unforeseen problems	limited early integration testing	integration testing is planned late in the schedule							
34	Data migration plan	an approved, documented data migration/conversion plan exists	a data migration/conversion strategy is documented in the project plan	data migration/conversion is assumed to be straight-forward based on vendor representations, so no plan exists							
35	Development and test environment	organization has environment ready to test packaged system in context of existing systems	organization has user group interested in testing package, but will require testing outside of regular work hours	organization has no convenient setting in which to test the package; will require negotiating down time for current systems							
36	Training of support staff	training included in deployment plan	training being made available as part of product	expect client to hire staff with appropriate background							
<b>Risk Category: Package Deployment</b>											
37	Configuration control of fielded systems	installation of new versions and upgrades into multiple sites is automated	installation of new versions takes moderate effort	installation of new versions is manual and takes considerable effort							
38	Installation difficulty	package is easy to install across multiple systems and sites	package is somewhat difficult to install across multiple systems and sites	package is difficult to install across multiple systems and sites							

Factor ID	Risk Factors	Low Risk Cues	Medium Risk Cues	High Risk Cues	Low	Medium	High	Not applicable	Need info	TBD	Notes
39	Plan for user acceptance testing	an approved, documented acceptance test plan exists and allocates sufficient time for acceptance testing	a few acceptance test cases will be run in a short time frame	no acceptance testing will be done							
<b>Risk Category: Package Characteristics</b>											
40	Quality of vendor documentation and training	product documentation and training materials are complete, accurate, and well designed	product documentation and training materials are not very well designed, complete, or accurate	product documentation and training materials are poor quality or inaccurate							
41	Adequate documentation for modifications	the product supplies enough documentation to support making modifications	the documentation to support making modifications is sketchy and/or incomplete	there is no documentation to support making modifications							
42	Undocumented features	all product features are documented	there are several undocumented features	there are numerous undocumented features in the product							
43	Package complexity	package is modular and easily configurable	package is modular but not easily configurable	package is complex and difficult to configure							
44	Package performance, scalability and reliability	there is hard data that supports product claims of performance, scalability and reliability	there is anecdotal data to support performance, scalability and reliability claims	there is no performance, scalability or reliability data for the product							
45	Package executable size	the package does not require large amounts of memory	the package requires a moderate amount of memory	the package requires a large amount of memory							
46	Availability and reliability	package constraints specify acceptable levels of downtime and/or data loss	package constraints specify levels of downtime and/or data loss that are marginally acceptable	levels of downtime and/or data loss specified are unacceptable							
47	Product maturity	product has been in use for several years in large installations	product has been in use for 1-2 years in medium installations	product is new to the market							

Factor ID	Risk Factors	Low Risk Cues	Medium Risk Cues	High Risk Cues	Low	Medium	High	Not applicable	Need info	TBD	Notes
48	Life expectancy of product	vendor has long term plans for product evolution and support	vendor has short term plans for product evolution and support	vendor has no plans for product evolution and support							
49	Accountability in fault allocation and correction	package faults can be easily isolated and corrected	package faults are somewhat difficult to isolate due to interoperability with other systems	package faults cannot be isolated due to interoperability with other systems							
50	Hooks to add new features	hooks to add new features are readily available and easy to use	hooks to add new features are available, but not easy to implement	there are no hooks to add new features							
51	Testing product functions	product functions are well documented and easy to test	product functions are documented, but somewhat difficult to test	product functions are not well documented and are difficult to test							
52	Testing product performance	product provides performance monitoring capabilities	product provides minimal performance monitoring capabilities	product does not provide performance monitoring capabilities							
53	Data or interface standards	the product adheres to reliable data and interface standards	the product uses some proprietary data formats or interfaces	the product uses only proprietary interface or data formats							
54	Data migration effort	data migration to new versions is automated and easy	data migration to new versions is somewhat automated and requires some effort	data migration is manual and requires considerable effort							
55	Security and control facilities	there is hard data to support vendor representations of the package's security and control facilities	there is only anecdotal data to support vendor representations of the package's security and control facilities	there is no data to support vendor representations of the package's security and control facilities							
<b>Risk Category: Package Vendor</b>											
56	Vendor involved in standards groups	vendor is involved in standards definition groups	vendor is indirectly involved in standards definition	vendor is not involved in standards definitions							

Factor ID	Risk Factors	Low Risk Cues	Medium Risk Cues	High Risk Cues	Low	Medium	High	Not applicable	Need info	TBD	Notes
57	Capability of consultants	vendor can supply fully trained consultants for development or training	vendor can supply consultants with moderate abilities	vendor cannot supply trained consultants familiar with the product							
58	Vendor experience in application domain	vendor has previous successful products in the package application domain	vendor has successful products in similar application domains	vendor is new to the package application domain							
59	Lag time for repairs	lag time for repairs to current products is short	lag time for repairs is moderate	problems not repaired until next release of product							
60	Maintenance of modifications	clear responsibility for maintenance of product modifications	responsibility for maintenance of modifications may be vendor or customer	responsibility for maintenance of modifications not defined							
61	Product evolution	vendor allows customers to have input into product evolution decisions	vendor invites review of options for new releases	vendor controls product evolution decisions							
62	New releases	new releases are well planned at regular intervals	new releases are frequent but planned	frequent unplanned upgrades							
63	Support for previous versions	vendor provides long term support for previous versions	vendor supports previous versions for up to one year	vendor supports previous versions for less than 6 months							
64	Compatibility with previous versions	new versions are both upward and downward compatible	new versions are only upward compatible	new versions are not compatible with previous versions							
65	Access to source	source code to product can be purchased or is in escrow	source code will be made available if company stops supporting product	no provisions for obtaining source code							
66	Vendor processes	vendor has good project management, configuration management, and testing processes in place	vendor has some development process problem areas	vendor cannot describe how they manage their software process							

Factor ID	Risk Factors	Low Risk Cues	Medium Risk Cues	High Risk Cues	Low	Medium	High	Not applicable	Need info	TBD	Notes
67	Vendor viability	due diligence has been performed and the vendor is in good financial standing	no financial information is available (vendor is privately held)	due diligence uncovered some vendor financial problems							
68	Licensing agreements	vendor offers enterprise licensing to reduce the cost of multiple seats	vendor offers flexible licensing agreements or site licenses	vendor does not offer flexible licensing agreements							
69	Vendor relationship to executives	no prior relationship or purchases exists	some recent contact, but no personal relationship exists	the vendor has a long-standing, close personal relationship to one or more executives							
70	Vendor dependency	similar products available from other sources	similar products available from limited sources	product like this only available from single source							
71	Life expectancy of vendor	vendor is solid and successful in the market	vendor is successful, but fairly new in the market	vendor is new to the market with no record of success							
<b>Risk Category: Product Interoperability</b>											
72	Compatibility with other packaged systems	package is compatible with other commonly used packaged systems	package is incompatible with some other commonly used packaged systems	package is not compatible with other commonly used packaged systems							
73	Interoperability with existing systems	package runs smoothly with other systems	minor data, timing, or control problems with other systems	there are data, timing, or control problems when the package is run with other systems							
74	Integration with existing systems	package is easy to integrate with existing systems	package is somewhat difficult to integrate with existing systems	package is difficult to integrate with existing systems							
75	Embedding package into other applications	package can be easily embedded in other applications	package can be embedded with modifications	package cannot be embedded in other applications							



Factor ID	Risk Factors	Low Risk Cues	Medium Risk Cues	High Risk Cues	Low	Medium	High	Not applicable	Need info	TBD	Notes
76	Access to data	other systems can easily access the data stored in the package; the data is in standard formats	access to the data in the package is difficult; some data is in proprietary formats or variations of standard formats	there is no access provided to the data in the package, or the data is in proprietary formats							
		<b>Total Categories</b>	<b>8</b>								
		<b>Total Factors</b>	<b>76</b>								

## L.4 GENERIC SOFTWARE ACQUISITION MANAGEMENT PROJECT RISK FACTORS

Generic Software Acquisition Management Project Risk Factors											
Project Name											
Prepared By											
Date mm/dd/yy											
Version											
Factor ID	Risk Factors	Low Risk Cues	Medium Risk Cues	High Risk Cues	Low	Medium	High	Not applicable	Need info	TBD	Notes
<b>Risk Category: Supplier Selection</b>											
1	Supplier selection criteria	organization weighs technical, process and cost implications when selecting supplier	organization advocates mitigating technical and process related risks while selecting low cost supplier	organization expects low cost supplier will be selected							
2	Supplier evaluation	potential suppliers' technical and process capabilities were reviewed by technical specialists and stakeholders	supplier alternatives were reviewed based on questionnaires or other high level materials	supplier capabilities reviewed by a small team of technical experts, who recommended selection without looking at alternatives							
3	End user involvement in supplier evaluation	end users were directly involved in evaluation of the supplier	end users reviewed the results of the evaluation	end users were not involved in the supplier evaluation							
4	Executive (or customer) influence	executives have expressed no written or verbal support for any particular supplier	executives have made written or verbal comments favoring a particular supplier	executives have made a written or verbal mandate of a particular supplier or customer has selected the supplier							
5	Number of supplier candidates	several qualified suppliers from which to choose	just a few qualified suppliers	this candidate is the sole potential supplier, thus evaluation is almost irrelevant; or all supplier candidates have poor prior performance records							

Factor ID	Risk Factors	Low Risk Cues	Medium Risk Cues	High Risk Cues	Low	Medium	High	Not applicable	Need info	TBD	Notes
6	Selection process documentation	the evaluation and selection process follows an approved, documented organization process	the evaluation and selection process were based on external recommendations	no documented evaluation and selection process was used							
7	Evaluation criteria	supplier evaluation criteria were developed based on defined requirements	supplier evaluated using pre-defined evaluation criteria	no evaluation criteria used in supplier selection process							
<b>Risk Category: Project Requirements</b>											
8	Documented business process	business process is well documented to allow for evaluation of system solution	business process documentation is out of date or abstract	process is undocumented so evaluation is not possible							
9	Well defined requirements	supplier solution was based on well defined requirements	requirements defined at an abstract level	no defined requirements for supplier							
10	Requirements available to supplier	all requirements have been passed along to the supplier	some critical requirements cannot be passed along directly, because of legal or other reasons	competitive situation or protection of trade secrets makes it impossible for supplier to talk directly to customer about requirements							
11	Prioritized requirements	requirements were clearly rated and ranked	requirements were rated but not ranked	requirements were not rated or ranked							
12	Testable requirements	requirements are testable, to allow for accurate assessment of evaluation criteria	some requirements are testable, some are difficult to assess	requirements are not testable							
13	Number of user areas or decision makers	1-3 user areas or decision makers	4-6 user areas or decision makers	more than 6 user areas or decision makers							
14	Acceptance test cases	test cases based on defined requirements or prior system functions	testing with supplier-defined test cases	no test cases defined							
15	Use of actual data	test cases use actual data from a live system	test cases use canned data from a test environment	test cases use canned data from supplier							

Factor ID	Risk Factors	Low Risk Cues	Medium Risk Cues	High Risk Cues	Low	Medium	High	Not applicable	Need info	TBD	Notes
16	Cost/benefit analysis	analysis of costs and benefits of supplier solution follows an approved, documented organization standard	cost analysis is done, but benefits are ill-defined or not defined at all	cost/benefit analysis shows no significant impact to the organization from this project							
17	Relative cost of solution	solution is based on existing systems and is competitive in price	solution requires significant modification to existing systems and cost is competitive	solution requires extreme modification and/or is high cost							
18	Effort estimation	supplier effort and cost estimates were based on detailed requirements	supplier effort and cost estimates were based on high level requirements	project requirements were not available to supplier when cost and effort estimates were provided.							
19	Possible increase in costs	low probability of cost increases during development and deployment	some probability of cost increases	high probability of cost increases during development and deployment							
<b>Risk Category: Solution Match to User Needs</b>											
20	User familiarity with another solution	users have widespread familiarity with a common alternative to the proposed solution	some users have experience with an alternative and expect similar capabilities in this solution	some (perhaps vocal) users have had good experience with a competitive/existing solution; don't want this one							
21	Executive support of process changes	there is strong executive support for business process changes to ensure solution implementation	executives are indifferent to need for business process changes	active opposition from executives to process changes							
22	Key user participation in process change	key users are participating in defining related business processes changes	key users are indirectly involved in defining business process changes	no key users are involved							
23	Match to Architectures	features of system fit organization architectures well (application, technology, data)	some elements of architecture are not addressed well	system is mismatch with significant elements of local architectures							

Factor ID	Risk Factors	Low Risk Cues	Medium Risk Cues	High Risk Cues	Low	Medium	High	Not applicable	Need info	TBD	Notes
24	Match to Documented Process	solution was selected after processes were documented and/or redesigned; fits well	solution selected while processes under definition; some mismatches to process, which must be changed	significant mismatch to elements of existing process, or process is undocumented so that comparison is not possible							
<b>Risk Category: Project Characteristics</b>											
25	Budget basis	budget based on early analysis of this solution	budget set during analysis of alternative solutions, without specifics about this one	budget based on what is available, not considering how this solution will be implemented							
26	Life cycle support	budget includes support for at least first several years of use	budget includes marginal support for a year from internal personnel	budget includes no funds for work other than implementation							
27	Time pressure	adequate time is allowed for selection, contract development and review, product development	parts of the overall acquisition project need to be rushed	the whole project is under intense time pressure							
28	Embedded products	budget includes funds for purchase and support of embedded products	budget includes funds for purchase of embedded products, but no other associated costs	budget was set without regard to costs of embedded products							
<b>Risk Category: Deployment</b>											
29	Not Invented Here (NIH) Factor	little concern in organization about whether solution is built or bought	some in organization prefer building own solutions, for ease of extension and support	strong culture for building their own solutions; if "not invented here," solutions are mistrusted							
30	Team prepared for procurement	project team has experience with system procurement and integration	work with systems is new to this group, but advice is being provided by experts	only member of team with experience in systems is provider of system							
31	Plan for integration and systems testing	adequate time has been allotted for integration and system testing	the schedule for integration and system testing is tight	very little time has been allocated for integration and system testing							

Factor ID	Risk Factors	Low Risk Cues	Medium Risk Cues	High Risk Cues	Low	Medium	High	Not applicable	Need info	TBD	Notes
32	Early integration testing	early integration testing is planned to prevent schedule slips due to unforeseen problems	limited early integration testing	integration testing is planned late in the schedule							
33	Acceptance test plan	acceptance tests scripts are documented and available early; supplier has approved	acceptance tests developed based on solution provided; limited supplier involvement	acceptance tests are not documented; key users will approve solution.							
34	Plan for user acceptance testing	an approved, documented user acceptance test plan exists and allocates sufficient time for acceptance testing	a few user acceptance test cases will be run in a short time frame	no user acceptance testing will be done							
35	Data migration plan	an approved, documented data migration/conversion plan exists	a data migration/conversion strategy is documented in the project plan	data migration/conversion is assumed to be straight-forward based on supplier representations, so no plan exists							
36	Development and test environment	organization has environment ready to test solution in context of existing systems	organization has user group interested in testing solution, but will require testing outside of regular work hours	organization has no convenient setting in which to test the solution; will require negotiating down time for current systems							
37	Training of support staff	training included in deployment plan	training being made available as part of rollout	expect to use staff with appropriate background							
38	Installation difficulty	installation of new versions and upgrades into multiple sites is well planned and/or automated	installation of new versions takes moderate effort	installation of new versions is manual and takes considerable effort							

Factor ID	Risk Factors	Low Risk Cues	Medium Risk Cues	High Risk Cues	Low	Medium	High	Not applicable	Need info	TBD	Notes
<b>Risk Category: Characteristics of the supplier solution</b>											
39	Quality of supplier documentation and training	system documentation and training materials are complete, accurate, and well designed to meet user needs	system documentation and training materials are not very well designed, complete, or accurate	system documentation and training materials are poor quality, inaccurate, or at wrong level for user							
40	Adequate documentation for modifications	the supplier provides sufficient documentation to support those making modifications	the documentation to support making modifications is sketchy and/or incomplete	there is no documentation to support making modifications							
41	Undocumented features	all product features are documented	there are several undocumented features	there are numerous undocumented features in the product							
42	Solution complexity	solution is modular and easily configurable	solution is modular but not easily configurable	solution is complex and difficult to configure							
43	Life expectancy of solution	supplier has documented long term plans for product evolution and support	supplier has short term plans for product evolution and support	supplier has no plans for product evolution and support							
44	Accountability in fault allocation and correction	system faults can be easily isolated and corrected	system faults are somewhat difficult to isolate due to interoperability with other systems	system faults cannot be isolated due to interoperability with other systems							
45	Hooks to add new features	hooks to add new features are readily available and easy to use	hooks to add new features are available, but not easy to implement	there are no hooks to add new features							
46	Data or interface standards	system adheres to reliable data and interface standards	system uses some proprietary data formats or interfaces	system uses only proprietary interface or data formats							
47	Data migration effort	data migration to new versions is automated and easy	data migration to new versions is somewhat automated and requires some effort	data migration is manual and requires considerable effort							

Factor ID	Risk Factors	Low Risk Cues	Medium Risk Cues	High Risk Cues	Low	Medium	High	Not applicable	Need info	TBD	Notes
<b>Risk Category: Supplier Capabilities</b>											
48	Capability of personnel	supplier can supply fully trained personnel for development or training	supplier can supply personnel with moderate abilities	supplier cannot supply trained personnel familiar with the system							
49	Supplier experience in application domain	supplier has previous successful solutions in the application domain	supplier has successful solutions in similar application domains	supplier is new to domain and has difficulty with it; or supplier is more experienced than acquirer and assumes too much							
50	Lag time for repairs	lag time for repairs to current systems is short	lag time for repairs is moderate	problems not repaired until next release							
51	Maintenance of modifications	clear responsibility for maintenance of system modifications	responsibility for maintenance of modifications may be supplier or customer	responsibility for maintenance of modifications not defined							
52	Input to system evolution	supplier allows acquirer to have input into product evolution decisions	supplier invites review of options for new releases	supplier controls product evolution decisions							
53	Support for previous versions	supplier provides long term support for previous versions	supplier supports previous versions for up to one year	supplier supports previous versions for less than 6 months							
54	Compatibility with previous versions	new versions are both upward and downward compatible	new versions are only upward compatible	new versions are not compatible with previous versions							
55	Access to source	source code to system is in escrow	source code will be made available if supplier stops supporting system	no provisions for obtaining source code							
56	Supplier processes	supplier has good project management, configuration management, and testing processes in place	supplier has some development process problem areas	supplier cannot describe how they manage their software process							



Factor ID	Risk Factors	Low Risk Cues	Medium Risk Cues	High Risk Cues	Low	Medium	High	Not applicable	Need info	TBD	Notes
57	License agreements	supplier offers enterprise licensing to reduce the cost of multiple seats	supplier offers flexible licensing agreements or site licenses	supplier does not offer flexible licensing agreements							
58	Supplier relationship to executives	no prior relationship or purchases exists	some recent contact, but no personal relationship exists	the supplier has a long-standing, close personal relationship to one or more executives							
59	Dependency on supplier	similar systems available from other sources	similar solutions available from limited sources	systems like this only available from single source							
60	Life expectancy of supplier	supplier is solid and successful in the market	supplier is successful, but fairly new in the market	supplier is new to the market with no record of success							
<b>Risk Category: Product Interoperability</b>											
61	Compatibility with other solutions or systems	solution is compatible with other commonly used solutions or systems	solution is not compatible with some other commonly used solutions or systems	solution is not compatible with other commonly used solutions or systems							
62	Interoperability with existing systems	solution runs smoothly with other systems	minor data, timing, or control problems with other systems	there are data, timing, or control problems when the solution is run with other systems							
63	Integration with existing systems	solution is easy to integrate with existing systems	solution is somewhat difficult to integrate with existing systems	solution is very difficult to integrate with existing systems							
<b>Risk Category: Acquirer/Supplier Relationship</b>											
64	Similarity of culture	cultures are very similar, and communication between teams is direct	some cultural differences exist, causing occasional revision and replanning	supplier personnel and acquirer personnel do not easily communicate or work together, adding time and cost to their interactions							

Factor ID	Risk Factors	Low Risk Cues	Medium Risk Cues	High Risk Cues	Low	Medium	High	Not applicable	Need info	TBD	Notes
65	Position of acquirer with customer	acquirer is the customer, or acts as facilitator of communication between supplier and customer	acquirer plays the role of go-between for supplier and customer	acquirer has direct relationship with customer, acts as a barrier between customer and supplier							
66	Involvement of acquirer technical staff	acquirer technical staff provide guidance to supplier, on request and as agreed in the contract	acquirer technical staff occasionally take on the supplier's work, outside the bounds of the contractual agreement	either supplier or acquirer staff is on site with the other group; tends to lose perspective of their own organization and "go native" or are unavailable when needed							
67	Level of acquirer management involvement	management asks for information and status, as agreed to in the contract; is available for decision making and conflict resolution as needed	management often asks for information from others on the acquisition team; is sometimes unavailable for decision-making	management is so involved with reviews and status checks that supplier wastes time preparing and responding or management is absent most of the time when decisions are needed							
<b>Risk Category: Monitoring of Supplier</b>											
68	Contract constraints on monitoring	contract provides for adequate technical interchange, progress review, and performance review	contract is vague about interactions, or contract limits some aspects of monitoring	contract does not address key areas for monitoring, and supplier is reluctant to provide status							
69	Effort of supplier required for monitoring activities	work expected of supplier is very close to what the supplier process already provides for their own use	supplier must do some additional work, but can see the value of the monitoring activities	supplier sees the monitoring work as seriously intrusive or requiring excessive effort, impeding project progress							
70	Frequency of monitoring activities	some type of review or interchange occurs fairly often, so that acquirer and supplier are kept aware of progress	reviews are planned at regular intervals, but there are long gaps during certain phases, or some personnel are not involved throughout	reviews and interchanges occur only at crises, or many interactions are canceled							

Factor ID	Risk Factors	Low Risk Cues	Medium Risk Cues	High Risk Cues	Low	Medium	High	Not applicable	Need info	TBD	Notes
71	Adequacy of escalation	escalation paths are well defined and used as appropriate to handle issues and problems	escalation paths are defined, but people tend to circumvent them at times	no escalation paths are defined; issues get resolved by executives or by the contract offices							
72	Contract terms for monitoring	contract includes penalties and rewards that can be used to enforce follow-up of action items from monitoring activities	contract has only a few payment options for ensuring action items are handled	contract provides no leverage for dealing with monitoring action items							
		<b>Total Categories</b>	<b>10</b>								
		<b>Total Factors</b>	<b>72</b>								

## Appendix M. Risk Register

A risk register for all types of projects is provided in the Risk Register worksheet. The risk register is organized with the following columns:

- **Risk Statement:** a clear and concise explanation of the context of the risk. The risk statement includes the:
  - **Risk (Event) Description:** explanation of the risk event or the occurrence that has caused the risk (e.g., customer submits changes to requirements after requirements are baselined)
  - **Risk Consequence:** potential effect or outcome of the risk (e.g., changes could extend project delivery completion date)
- **Risk Trigger/Causes:** act or event that serves as a stimulus and initiates or precipitates the risk
- **Assessment:** a value (e.g., Low=1, Medium=2, High=3) that represents the result of identifying, classifying, analyzing, and prioritizing risk
  - **Impact:** result of determining the nature of possible effects of the risk
  - **Probability:** degree of likelihood or chance that the risk will occur
  - **Level of Control:** extent to which the project team lacks control over the risk being realized
  - **Total:** sum of the Impact, Probability, and Level of Control values; the cell contains a formula that will calculate the sum automatically
- **Risk Response Strategy:** one or more options to address the risk
- **Actions Required to Implement Response Strategy:** activities that will be carried out in order to accomplish the risk response strategy (e.g., revising the Project Plan to include additional activities, defining various alternatives to address the risk)
- **Risk Owner:** name of the individual(s) or party(s) responsible for managing the risk
- **Completion Date:** date (mm/dd/yy) the risk response actions were completed

**RISK REGISTER**

<b>Risk Register</b>											
Agency/Organization Name								Version Number			
Project Name								Revision Date mm/dd/yy			
Risk #	Risk Statement		Risk Trigger/ Causes	Assessment Low=1, Medium=2, High=3				Risk Response Strategy	Actions Required to Implement Response Strategy	Risk Owner	Completion Date mm/dd/yy
	Risk (Event) Description	Impact (Consequence) Description		Impact	Probability	Level of Control	Total				
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
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## Appendix N. Risk Checklists

### N.1 RISK MANAGEMENT INITIATION CHECKLIST

Risk Management Initiation Checklist		
Project Name		
Prepared By		
Date mm/dd/yy		
ID	Yes/No	Items to be considered
<b>Consider these when initiating the overall process</b>		
1		Has funding been initially allocated to support risk management?
2		Have resources been assigned for risk identification?
3		Are the following organizations represented on the risk identification team? <ul style="list-style-type: none"> <li>• Project Team</li> <li>• Support Groups (Quality Assurance, Configuration Management, test, documentation, training, etc.)</li> <li>• Representatives from other elements of the program, if the project is part of a larger program</li> <li>• Partner or supplier representative</li> <li>• User representative</li> </ul>
4		Has time been made available for the risk identification team to perform their tasks?
5		Have risk factors been selected for use by the identification team? Have they included the following? <ul style="list-style-type: none"> <li>• General risk table (or one tailored to the organization)</li> <li>• Specific risk factor table for this type of project</li> <li>• Lessons learned on previous projects</li> <li>• Use these items when reviewing the results of risk identification</li> </ul>
6		Has relevant risk factor been rated?
7		For each factor rated high, has a specific risk statement been written?
8		For each specific risk statement, have the conditions and consequences to the project been stated?
9		Have the specific risks been organized into sets that support the analysis of impact and the development of mitigation actions?
10		Have the risks been reviewed to determine which require further analysis?
<b>Use these items when reviewing the results of analysis of specific risks</b>		
11		Has each risk statement been assigned a probability of occurrence?
12		Has each risk statement been assigned an impact if risk occurs?
13		Has the risk severity (e.g., = probability x impact) been calculated for each risk statement?
14		Have the risks been ranked in order of severity and agreed to by the team?
15		Have other project members and stakeholders reviewed and commented on the list?

ID	Yes/No	Items to be considered
16		Has the risk identification team reviewed and incorporated comments from other project members and stakeholders?
17		With the risks as identified, should the project proceed as planned?
<b>Use these items when reviewing the results of planning risk handling actions</b>		
18		Is there a response strategy for each risk that is to be addressed?
19		For each risk, has an effort and/or cost been estimated for the response strategy?
20		Has a contingency plan been identified for the appropriate risks?
21		Does the work breakdown structure for the project include risk management and response strategy actions?
22		Have all the contingency plans been documented and do they include anticipated cost and effort?
23		Has an agreement with management been made on when and if to authorize the use of a contingency plan?
24		Other?

**N.2 RISK MANAGEMENT PROGRESS CHECKLIST**

Risk Management Progress Checklist		
Project Name		
Prepared By		
Date mm/dd/yy		
ID	Yes/No	Items to be considered
1		Is there a regular status review and update of key risks to assure they are under control?
2		Is the Top Risk List reviewed and updated? (weekly, monthly, quarterly)
3		Has the Top Risk List been disseminated to the appropriate people within the organization?
4		For each scheduled risk response action, is there progress in addressing the risk as planned?
5		For any risk exceeding defined trigger values, has the appropriate level of management approved the implementation of the contingency plan?
6		Has any required risk status report been prepared for disseminating information at progress (and any other appropriate) reviews?
7		Has the project schedule been undated to reflect the implementation of any approved risk contingency plans?
8		Has the Project Team been reviewing the project for other risks that have appeared?
9		Has the process to accept additional risks from project members and outside stakeholders been followed?
10		Other?



### N.3 RISK MANAGEMENT COMPLETION CHECKLIST

Risk Management Completion Checklist		
Project Name		
Prepared By		
Date mm/dd/yy		
ID	Yes/No	Items to be considered
1		Was it identified in the Project Plan when the effectiveness of a risk management process would be evaluated? (phase completion, periodically, project completed or terminated )
2		Were review session(s) organized with appropriate people invited to attend?
3		<p>Were the results of the risk management activities reviewed? The results should have included at least the following:</p> <ul style="list-style-type: none"> <li>• Risks that were detected initially and successfully handled</li> <li>• Risks that were detected during the project, but not identified at the start</li> <li>• Problems that arose during the project, but were not detected as risks at any point</li> <li>• Cost and effort of the risk management activities</li> <li>• Cost and effort of risk mitigation activities</li> <li>• Cost and effort of contingency plans that were implemented</li> </ul>
4		Did the review session identify any implementation problems from the participants?
5		<p>Were any lessons for future risk management processes identified? Items of interest should have included:</p> <ul style="list-style-type: none"> <li>• Mitigation activities that were effective</li> <li>• Contingency actions that were successful</li> <li>• Changes to the ineffective mitigation activities</li> </ul>
6		<p>Were changes identified to risk factors for use in the future? Items of interest should have included:</p> <ul style="list-style-type: none"> <li>• New factors to include in the appropriate risk factor table</li> <li>• Factors that can be removed from the table</li> <li>• Changes in the cues provided in the chart for high, medium, and low risks</li> </ul>
7		Were the results of the analysis incorporated into risk factor tables and the risk management process?
8		Were the results of the analysis disseminated to other projects that were using the risk management process at that time?
9		Other?

## Appendix O. Risk Item

Risk Item Report	
Project Name	
Prepared By	
Date mm/dd/yy	
Risk Item Description	
Risk ID	
Last Update	
Current Rank in Top N (e.g., 10) Risk	
Risk Statement Condition	
Risk Statement Consequence	
Probability	
Impact	
Severity	
Rank	
Current Response Strategy	
Owner	
Date Response Strategy Started	
Date to Complete Response Strategy	
Response Strategy Status	
Trigger and Value for Contingency Plan	
Contingency Plan	
Revision History	
Point of Contact	
Date Closed	

## Appendix P. Risk Status

Risk Status Report						
Agency/Organization Name				Version Number		
Project Name				Revision Date mm/dd/yy		
Rank	Risk Statement		Rank This Time	Rank Last Time	# Times on List	Risk Response Progress
	Condition	Consequence				